



**Saskatchewan  
Ministry of  
Highways and  
Infrastructure**

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**2010 Ferry Traffic and  
Seasonal/Winter Roads  
Annual Report**

Traffic Services  
Information Management Branch  
Ministry Services and Standards Division





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## Executive Summary

This report summarizes traffic data collected at the 12 cable-stayed ferries and one free swimming ferry barge operated by the Ministry of Highways and Infrastructure during 2010. The report provides an analysis of passenger and vehicle volumes as well as traffic composition. Information about four seasonal roads operated by the Ministry is also included.

The main findings of the 2010 report are listed below.

- Vehicle volumes decreased slightly from 2009 levels, but were still above the ten year average.
- The 2010 ferry operating season length was approximately 1.1% shorter than in 2009.
- The total amount of down time reported by all ferries was higher than in 2009. Three ferries reported over 5% downtime, while three reported no down time at all.
- The Lancer ferry was shut down for the longest period of time because of high water conditions.
- The Fenton ferry did not open until June 3 because of low water conditions.
- Seven other ferries at Riverhurst, Paynton, St. Laurent, Weldon, Hague, Lemsford, and Estuary were shut down for shorter periods due to repairs, high winds, or high water.
- The 2010 Average Daily Traffic (ADT) on the whole ferry system was 3.7% lower than the 2009 ADT.
- Paynton and Fenton ferries carried 10% more vehicles in 2010 than in 2009. Wollaston Barge recorded the biggest change of vehicle traffic reporting a 42.2% increase from 2009.
- Riverhurst, Hague, Estuary and Lancer ferries carried more than 10% less vehicles in 2010 than in 2009.
- Increases in ADT occurred at the Paynton, St. Laurent, Fenton, and Wollaston barge ferries in 2010.
- As in previous years, the Clarkboro ferry had the highest traffic volume. The ADT in 2010 was 388 vehicles per day. This was 3.8% lower than in 2009, despite the fact that the ferry increased its operating day by two hours.
- Truck traffic percentages decreased at Clarkboro, Weldon, St. Laurent, and Wingard. All other ferries had an increase in truck traffic percentages.

The 2010 report recommends:

- Providing an updated data sheet to operators of ferries that send a month's data on one sheet, including columns operators are currently using, and a column that will emphasize reporting of downtime periods.



## 1.0 Introduction

This annual report provides a summary and analysis of the traffic using the provincial ferry system in 2010. It also examines vehicle types and historic traffic for each ferry. Useful insights into the function of each ferry can be obtained by examining the distribution and composition of ferry traffic. Passenger data for twelve of the ferry sites and operational information about the four seasonal/winter roads are also included in this report.

## 2.0 Background

The Ministry operated twelve cable-stayed ferries and one free swimming barge ferry during 2010. Cable-stayed ferries operated on the North Saskatchewan and South Saskatchewan Rivers and on Lake Diefenbaker. The single free swimming ferry operates on Wollaston Lake to serve the community of Wollaston Lake. Other than replacing the Cumberland ferry with a bridge in 1996, the ferry system has not changed since responsibility for the system was moved to the Ministry in 1992. Ferry locations are shown in Table I below.

**Table I. Ferry Locations**

Ferry	Location	Ministry Region
Clarkboro	South Saskatchewan River	Central Region
Riverhurst	Lake Diefenbaker	Southern Region
Paynton	North Saskatchewan River	Central Region
Weldon	South Saskatchewan River	Northern Region
St. Laurent	South Saskatchewan River	Central Region
Cecil	North Saskatchewan River	Northern Region
Hague	South Saskatchewan River	Central Region
Wingard	North Saskatchewan River	Central Region
Lemsford	South Saskatchewan River	Southern Region
Estuary	South Saskatchewan River	Southern Region
Fenton	South Saskatchewan River	Northern Region
Lancer	South Saskatchewan River	Southern Region
Wollaston Barge	Wollaston Lake	Northern Region

Ferry traffic data was collected by the ferry operators and forwarded to the traffic engineers, who analyzed and compiled this annual report. The vehicle classification forms used by ferry operators are shown in Appendix A.

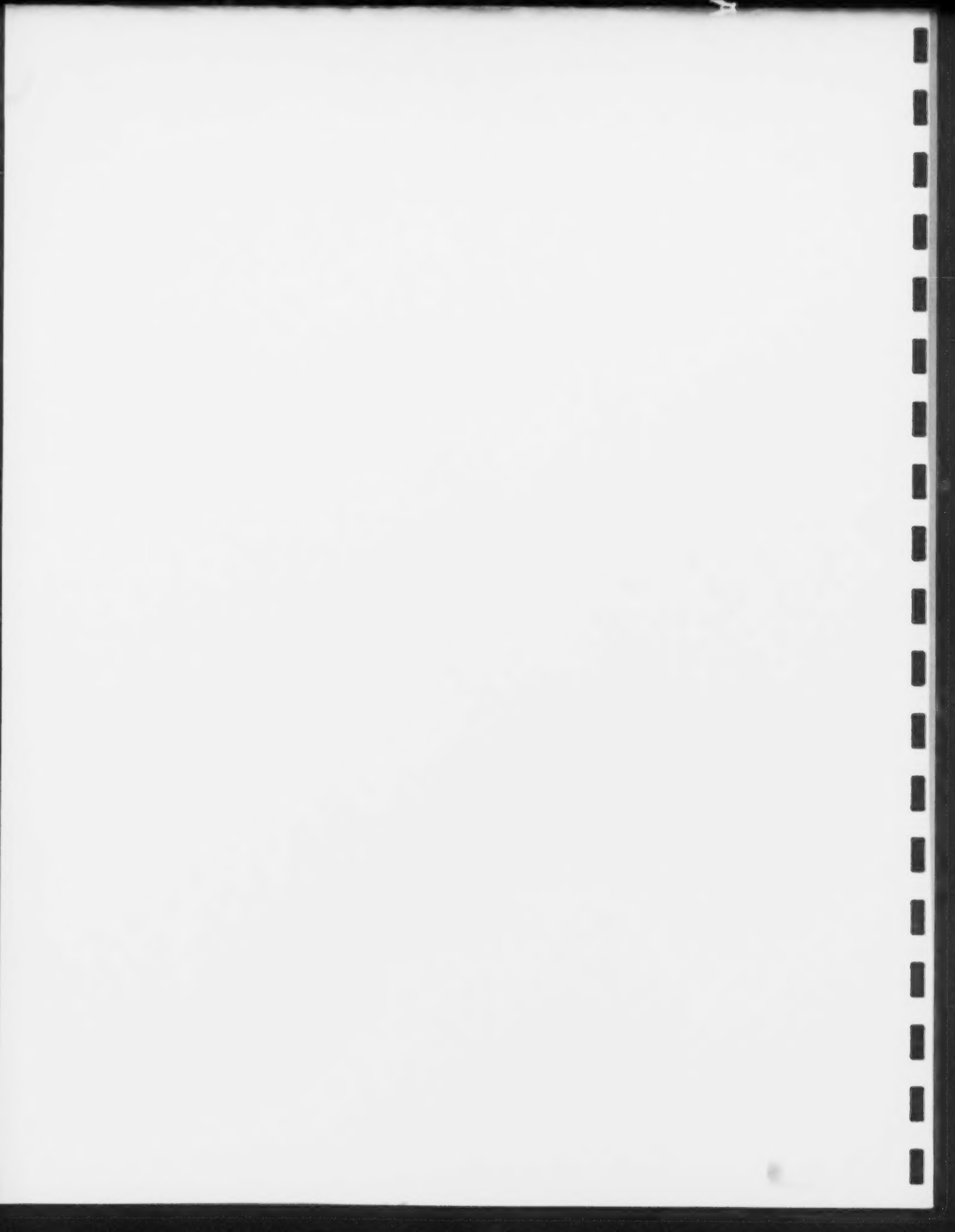
During the winter months, the Ministry operated four seasonal/winter roads in 2010, for a total length of approximately 458 km. These roads provide access to isolated communities and seasonal industrial activities. The operational periods of these roads vary considerably from year to year because of weather conditions and economic fluctuations. Seasonal/winter road locations are shown in Table II below.



**Table II. Seasonal/Winter Road Locations**

Road	Location	Length (km)	Region
Cumberland House	Hwy 9 to Cumberland House	52	Northern Region
Riverhurst	Hwy 42 across Lake Diefenbaker	2	Southern Region
Wollaston Lake	Hwy 905 to Wollaston Lake	46	Northern Region
Athabasca	Points North Landing to Uranium City	358	Northern Region

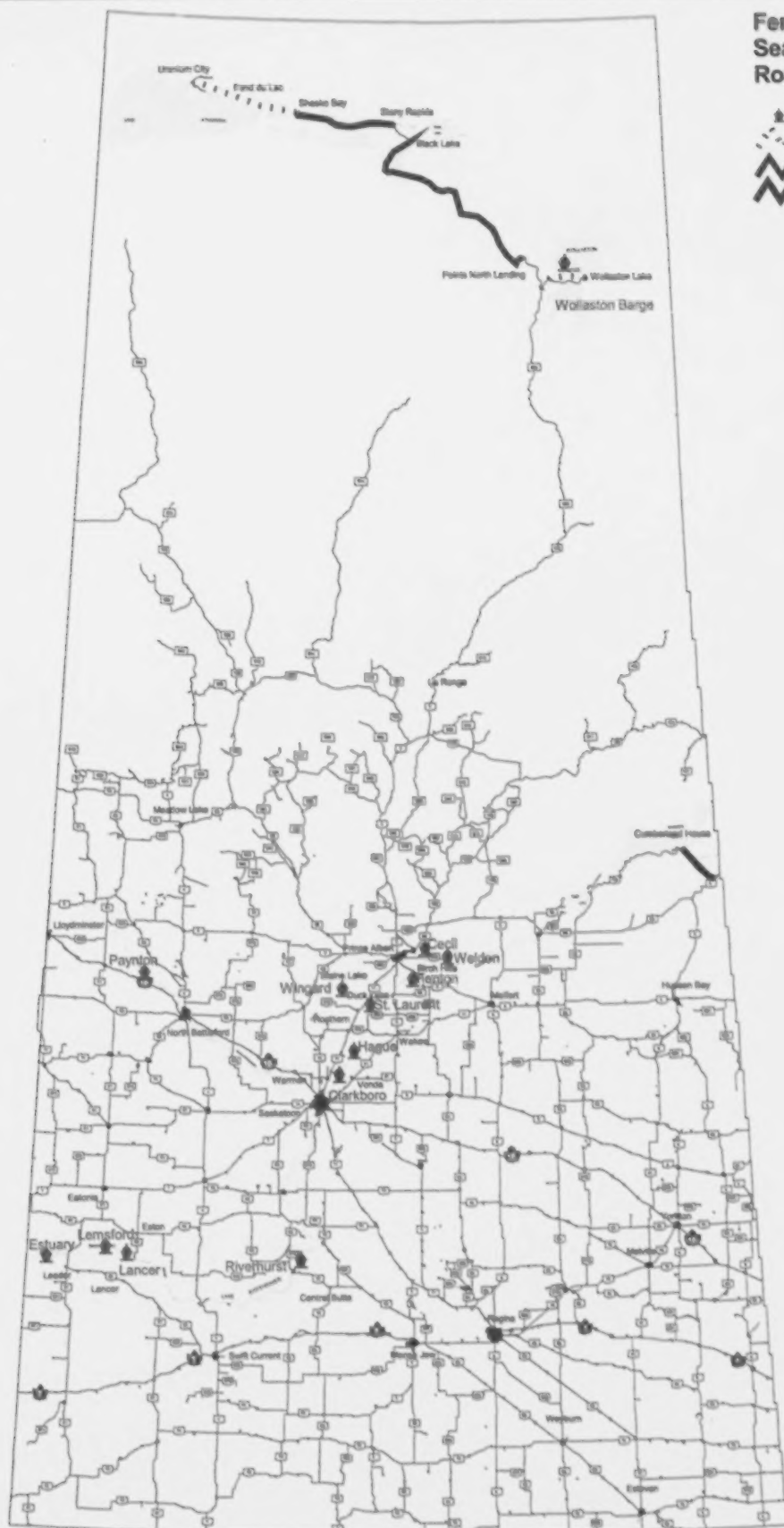
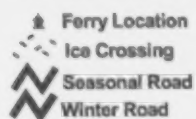
The locations of the ferries and seasonal/winter roads, including ice crossings, are shown on the map on the following page.







## Ferry and Seasonal/Winter Road Locations





### 3.0 Ferry Operating Seasons

All ferries, except the Riverhurst, Clarkboro and the Wollaston Barge ferries operated 17 hours per day between the hours of 7:00 am and midnight. Riverhurst and Wollaston Barge both operate 24 hours a day, while Clarkboro increased its hours of operation to 19 hours, from 5:00 am to midnight. Ferries do not run at times because of mechanical failure, bad weather, or poor river conditions. Table III below summarizes the 2010 operational season including downtime at all ferries in the province. Details of the downtime periods and their causes are shown in Appendix B. The majority of sites had minimal downtime, with only one site registering out of service time higher than 10% of possible operating time. The Lancer ferry reported the largest amount of downtime with 539 hours representing 15.1% operating time, while Estuary and Hague also had over 200 out of service hours representing 7.7% and 7.3% of operating time respectively. Fenton ferry reported no out of service hours, however, its opening date was delayed until the beginning of June due to poor river conditions.

**Table III. 2010 Ferry Operating Season Statistics**

Ferry	Season				Out of Service	
	Opening	Closing	Length (days)	Operating Hours	Hours	Percent
Clarkboro	Apr 13	Nov 18	219	4161	0	0.0
Paynton	Apr 27	Nov 12	199	3312.5	65.5	1.9
Riverhurst	May 7	Nov 25	202	4807.5	18.5	0.4
Weldon	Apr 21	Nov 4	197	3320	17	0.5
St. Laurent	Apr 21	Nov 17	210	3502	68	1.9
Cecil	Apr 22	Nov 4	196	3325	0	0.0
Wingard	Apr 20	Nov 13	207	3519	0	0.0
Lemsford	Apr 20	Nov 15	209	3456	76.5	2.2
Hague	Apr 19	Nov 18	213	3356	265	7.3
Fenton	Jun 3	Nov 2	152	2580	0	0.0
Estuary	Apr 20	Nov 16	210	3296	274	7.7
Lancer	Apr 21	Nov 17	210	3027	539	15.1
Wollaston Lake	Jun 12	Oct 26	136			



## 4.0 Volume, Passenger and Classification Summaries

Table IV below summarizes the 2010 monthly traffic at the ferry sites. Historic traffic volumes for these ferries are shown in Appendix C. The average number of vehicles using the ferry per day is represented by the Average Daily Traffic (ADT). Historic ADT is shown in Appendix D. ADT at the Riverhurst ferry, Clarkboro ferry and Wollaston Barge ferry can not be directly compared to other ferries. The Riverhurst ferry operated 24 hours a day and Clarkboro operated 19 hours a day, whereas the other cable-stayed ferries operated 17 hours a day. The Riverhurst ferry is also the only ferry that is located on a provincial highway.

**Table IV. Monthly Ferry Traffic Volumes for the 2010 Season**

Ferry	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Total	ADT
Clarkboro	5,529	11,485	11,960	12,742	13,825	11,689	12,226	5,737	0	85,193	389
Paynton	323	4,110	4,177	5,942	5,401	4,443	4,167	1,602	0	30,165	155
Riverhurst	0	2,519	4,908	7,654	5,955	3,908	3,164	2,028	0	30,136	150
Weldon	873	4,566	4,552	3,996	4,480	4,005	3,716	303	0	26,491	136
St. Laurent	627	2,563	2,458	6,254	2,867	2,410	2,829	1,069	0	21,077	102
Cecil	355	1,852	2,007	2,113	2,265	1,719	1,704	177	0	12,192	62
Wingard	328	1,135	1,511	2,502	1,786	1,378	1,386	385	0	10,411	50
Lemsford	356	1,047	1,059	1,557	1,353	1,123	1,467	582	0	8,544	42
Hague	382	1,216	761	1,015	1,465	1,319	1,424	555	0	8,137	41
Fenton	0	0	1,223	1,515	1,596	1,628	1,449	77	0	7,488	49
Estuary	266	825	604	1,319	1,351	1,347	1,395	656	0	7,763	40
Lancer	183	812	300	898	1,178	990	1,064	530	0	5,955	33
Wollaston Barge	0	0	76	174	186	129	119	0	0	684	5
<b>Totals</b>	<b>9,222</b>	<b>32,130</b>	<b>35,596</b>	<b>47,681</b>	<b>43,708</b>	<b>36,088</b>	<b>36,110</b>	<b>13,701</b>	<b>0</b>	<b>254,236</b>	

Table V summarizes the 2010 monthly number of passengers for the cable-stayed ferry sites. Historic passenger volumes for these ferries are shown in Appendix E.



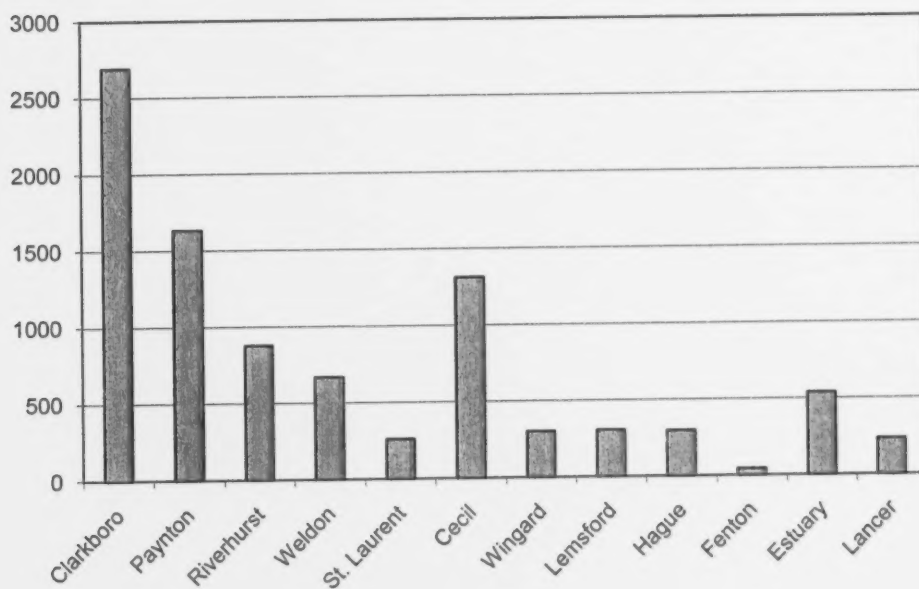
**Table V. Monthly Ferry Passenger Volumes for the 2010 Season**

Ferry	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
Clarkboro	8,342	17,801	19,418	19,685	22,542	17,762	18,630	8,731	0	132,911
Paynton	458	6,358	6,736	10,670	6,154	6,926	6,751	2,231	0	46,284
Riverhurst	0	4,165	8,636	14,828	11,116	6,790	5,442	3,212	0	54,189
Weldon	1,655	9,053	9,100	7,994	4,480	7,167	6,864	460	0	46,773
St. Laurent	1,128	5,314	5,238	13,480	6,032	4,646	5,691	1,955	0	43,484
Cecil	604	3,089	3,613	4,189	4,445	2,839	2,962	274	0	22,015
Wingard	682	2,433	3,644	6,650	4,068	2,943	2,982	726	0	24,128
Lemsford	621	1,616	1,698	2,670	2,312	1,748	2,239	858	0	13,762
Hague	522	1,905	1,347	1,677	2,291	2,021	2,166	904	0	12,833
Fenton	0	0	1,952	2,456	2,600	2,440	2,099	89	0	11,636
Estuary	475	1,521	1,083	2,688	2,442	2,378	2,327	1,167	0	14,081
Lancer	245	1,157	451	1,554	1,915	1,686	1,552	722	0	9,282
<b>Totals</b>	<b>14,732</b>	<b>54,412</b>	<b>62,916</b>	<b>88,541</b>	<b>70,397</b>	<b>59,346</b>	<b>59,705</b>	<b>21,329</b>	<b>0</b>	<b>431,378</b>

Passenger volumes have been recorded since 2000 at all locations except for Riverhurst and St. Laurent; these locations have recorded volumes since 1996 and 2003 respectively.

Ferry operators record the type of vehicles using the ferries. The breakdown of vehicle types is summarized in the charts below. The Wollaston Barge ferry is not included in these graphs because it uses a unique classification scheme.

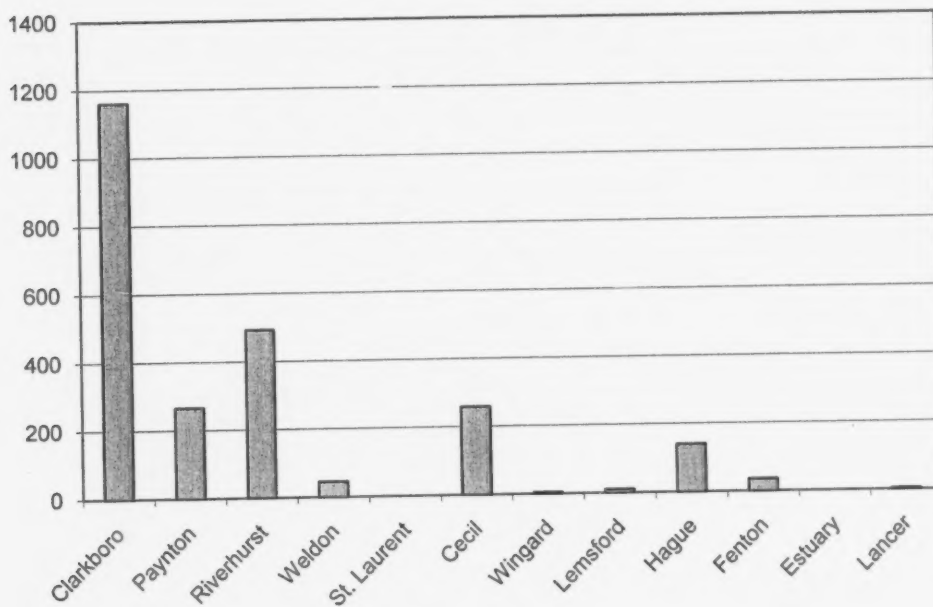
**Chart 4.0A 2010 Straight Trucks by Location**



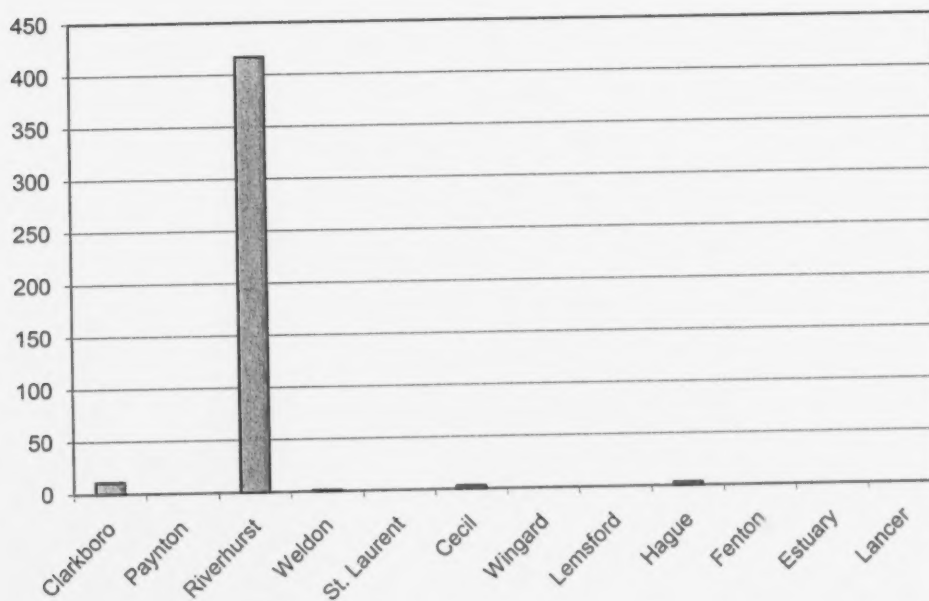




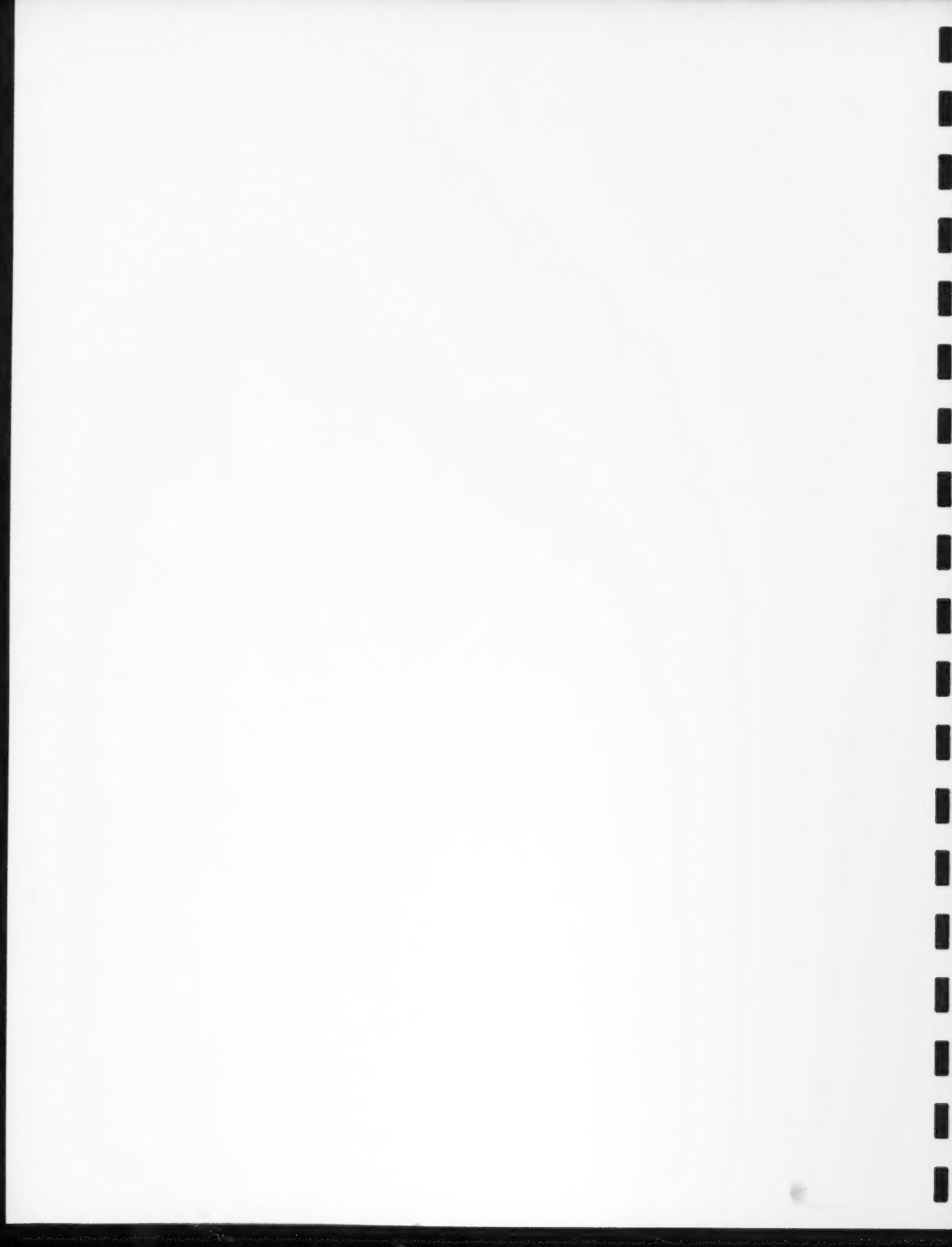
**Chart 4.0B 2010 Single Trailer Trucks by Location**



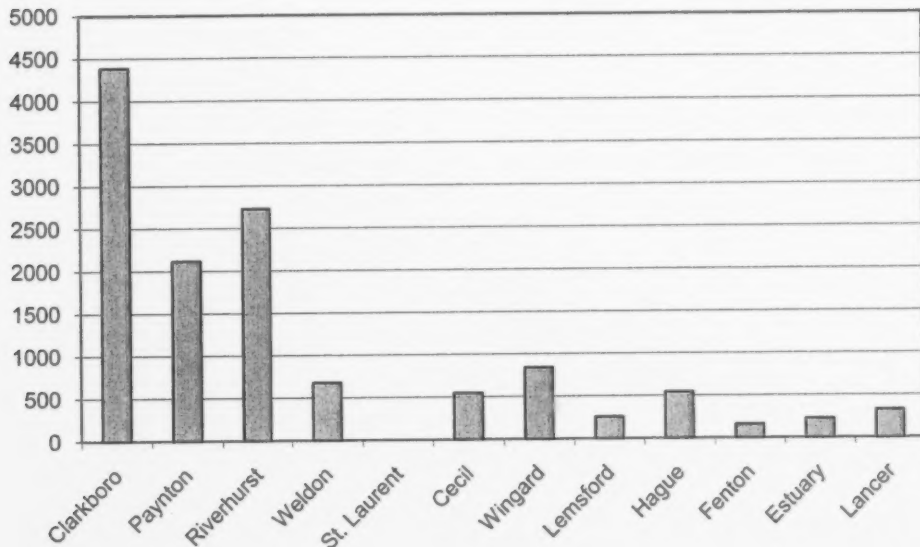
**Chart 4.0C 2010 Multi Trailer Trucks by Location**



Most ferries are not long enough to accommodate multi trailer trucks.

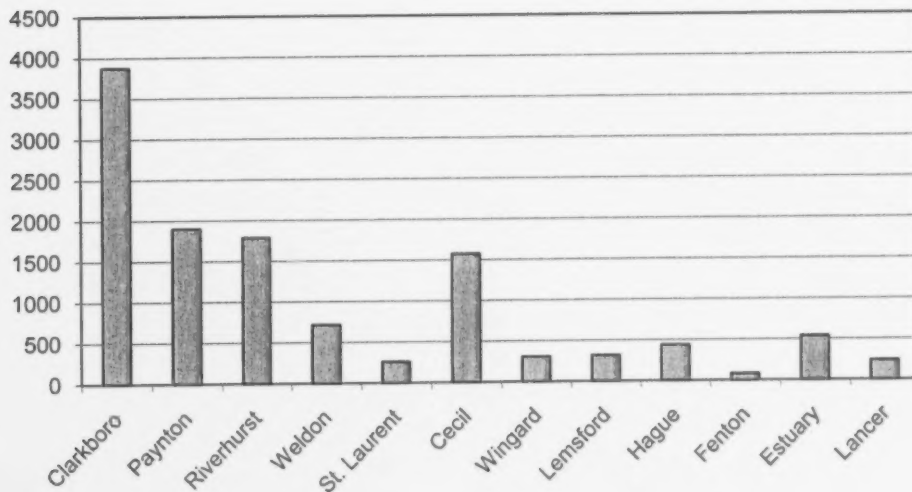


**Chart 4.0D 2010 Other Vehicles by Location**



The vehicle category "other" normally refers to farm or construction equipment except near recreation areas, where there are often recreational vehicles or passenger vehicles pulling a boat or camping trailer.

**Chart 4.0E 2010 Commercial Vehicles by Location**



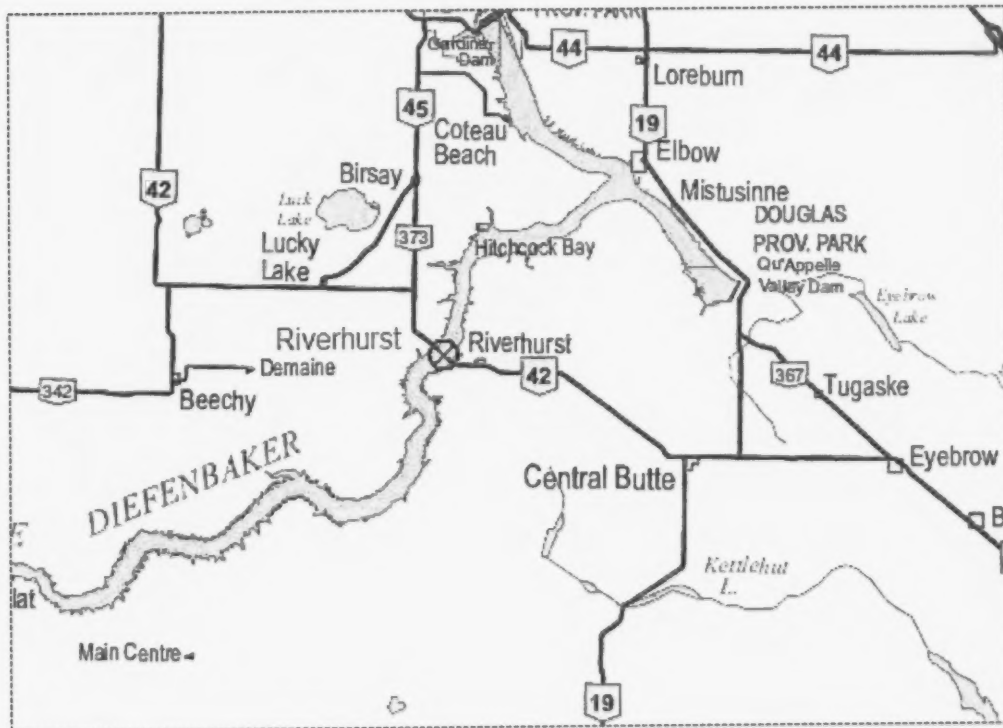
The commercial vehicles shown above only contain straight, single and multi trailer trucks. The "other" vehicles are not included because they are typically not hauling freight or commodities.



## 5.0 Site by Site Analysis

The ferry traffic data in this section is summarized by Ministry maintenance area. The area by area analysis results in six groupings: Moose Jaw, North Battleford, Prince Albert, Saskatoon, Swift Current and Wollaston.

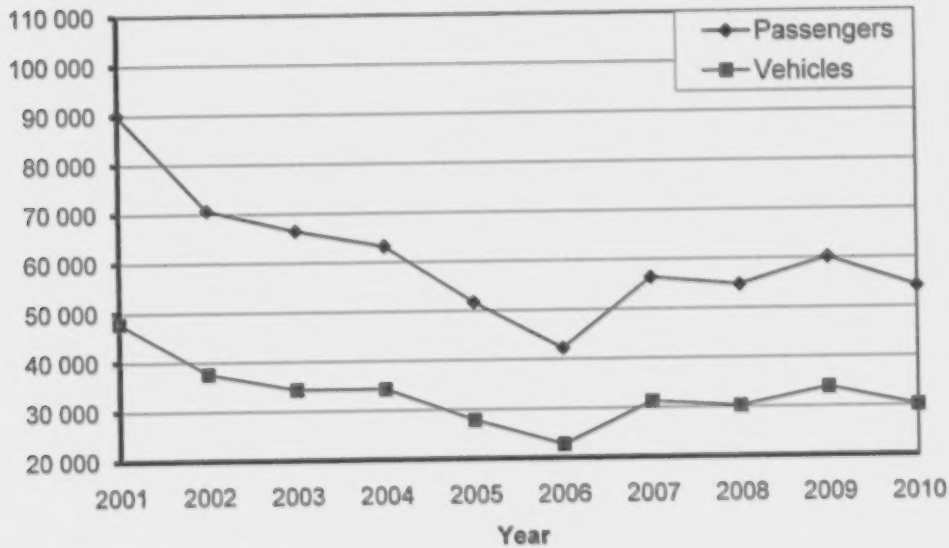
### 5.1 Moose Jaw Area



The Moose Jaw area contains only the Riverhurst ferry, which is the largest and most sophisticated cable-stayed ferry in the province. This is the only ferry in the system located on a provincial highway. The Riverhurst ferry carries traffic on Highway 42 across the 2 km width of Lake Diefenbaker.



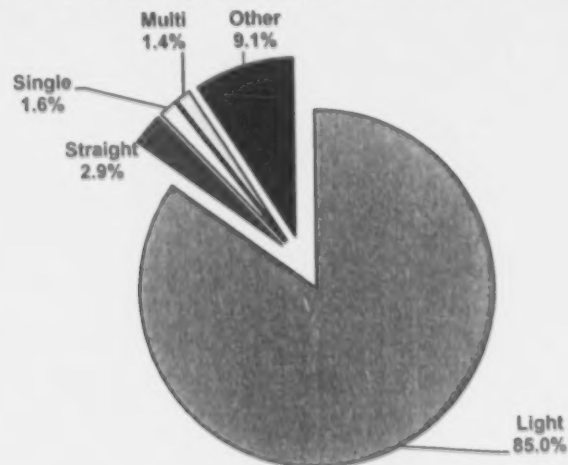
**Chart 5.1A 10 Year History of Traffic on the Riverhurst Ferry**



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Vehicles	47 867	37 578	34 288	34 258	27 829	22 741	31 245	30 203	33 886	30 136	33 003
Passengers	90 056	70 700	66 422	63 193	51 692	42 213	56 320	54 742	60 157	54 189	60 968
ADT	204	176	169	153	127	144	139	141	162	150	157
Truck %	7.0	7.7	7.0	6.4	6.3	5.5	6.5	6.1	5.6	5.9	6.4

All traffic indicators on the Riverhurst ferry were below the ten-year average. Vehicle totals decreased by 12%, and the ADT decreased 8 per cent. Decreases are largely due to the reduced length of the operating season. Historical records indicate that the closure date was the earliest since 1996.

**Chart 5.1B Vehicle Types Using the Riverhurst Ferry**



Riverhurst ferry had the highest percentage of "other" vehicles.





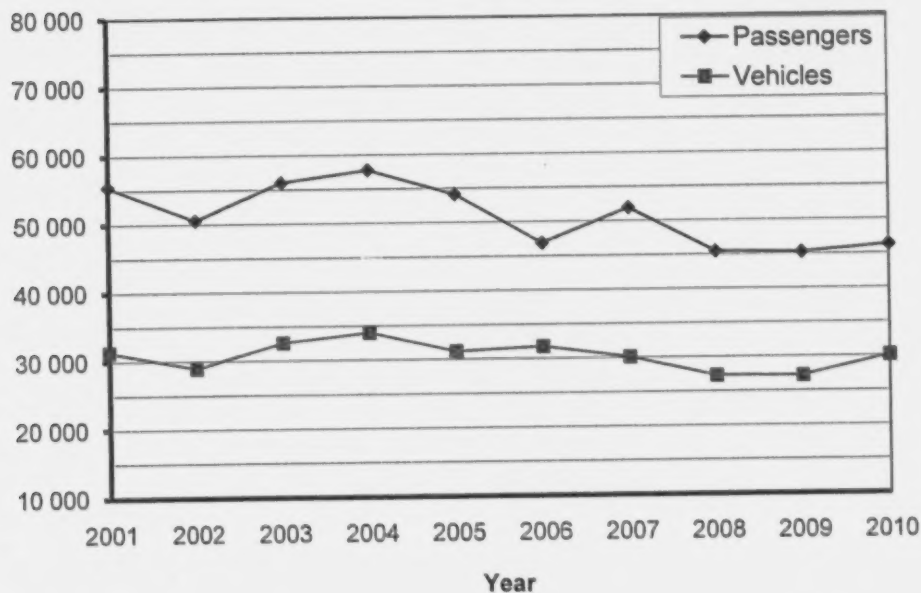
## 5.2 North Battleford Area



The North Battleford area has only the Paynton ferry.



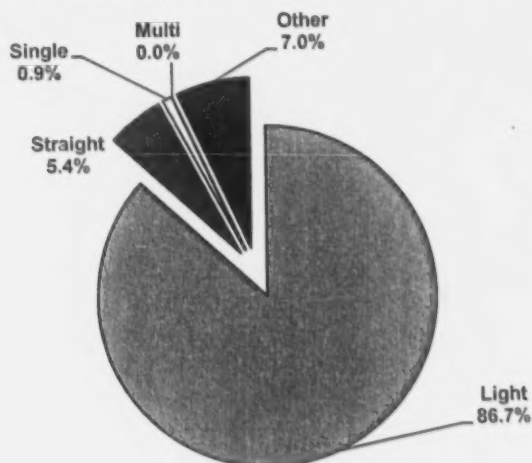
**Chart 5.2A 10 Year History of Traffic on the Paynton Ferry**



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Vehicles	31 348	28 910	32 603	33 996	31 155	31 752	30 111	27 270	27 212	30 165	30 452
Passengers	55 475	50 577	56 014	57 743	54 100	46 889	51 909	45 457	45 234	46 284	50 968
ADT	158	167	175	180	161	169	162	152	140	155	162
Truck %	12.0	14.0	13.2	12.1	11.4	12.3	10.4	7.4	5.7	6.3	10.5

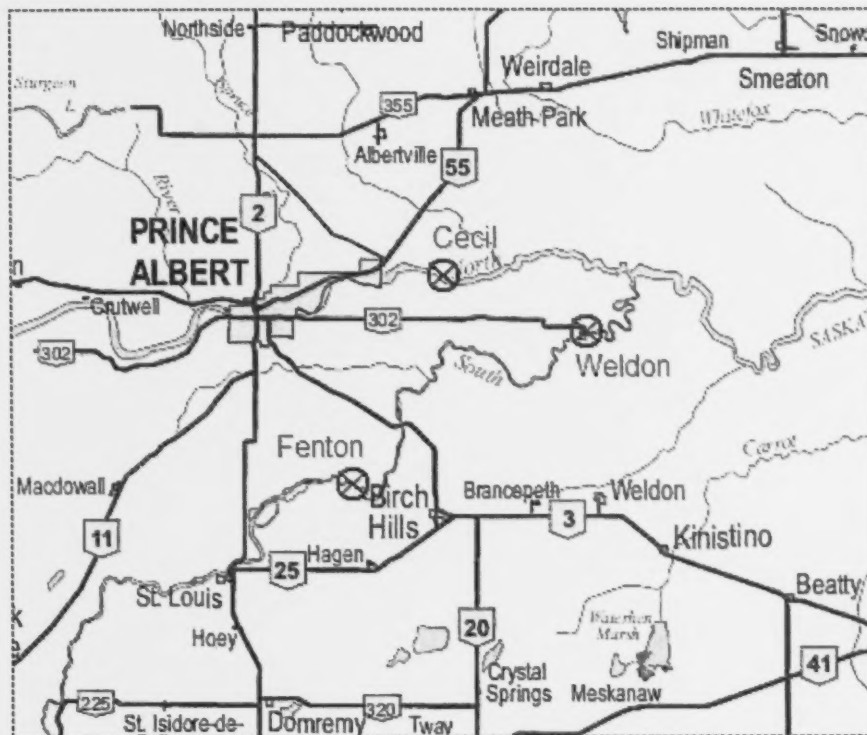
In 2010, traffic increased to levels comparable to the ten year average. Both vehicle totals and ADT increased 10% from 2009.

**Chart 5.2B Vehicle Types Using the Paynton Ferry**





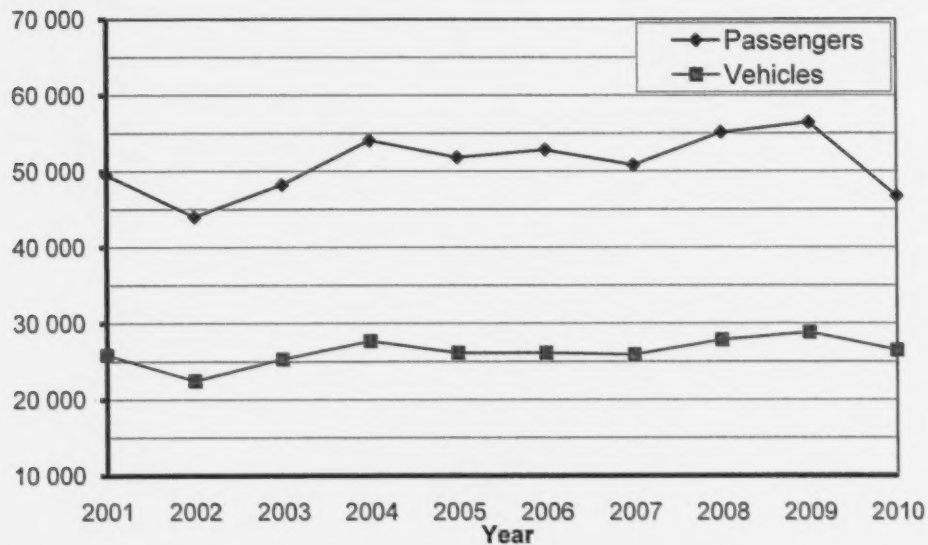
### 5.3 Prince Albert Area



The Prince Albert area includes the Weldon, Cecil and Fenton ferries.



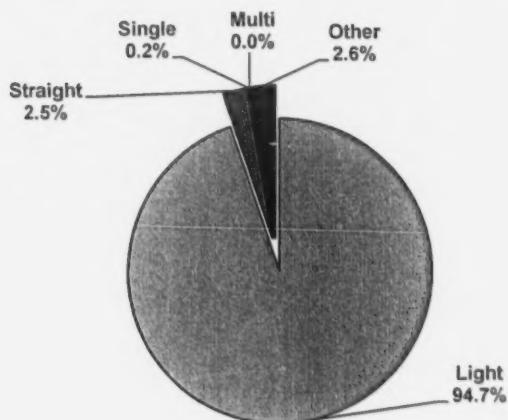
**Chart 5.3A 10 Year History of Traffic on the Weldon Ferry**



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Vehicles	25 875	22 461	25 308	27 709	26 124	26 137	25 887	27 838	28 850	26 491	26 268
Passengers	49 555	44 007	48 249	54 082	51 835	52 851	50 847	55 133	56 449	46 773	50 978
ADT	135	133	142	141	144	144	137	146	145	136	140
Truck %	5.2	3.8	5.9	3.8	3.4	3.1	3.5	3.4	3.0	2.7	3.8

In 2010, traffic on the Weldon ferry decreased by 8% compared to 2009. Passenger totals show a large drop of 17% from 2009 to 2010.

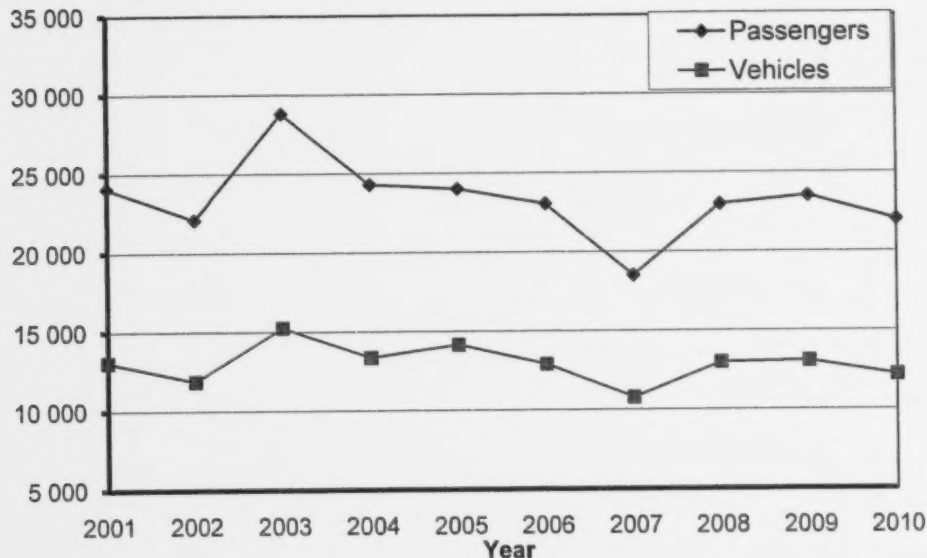
**Chart 5.3B Vehicle Types Using the Weldon Ferry**







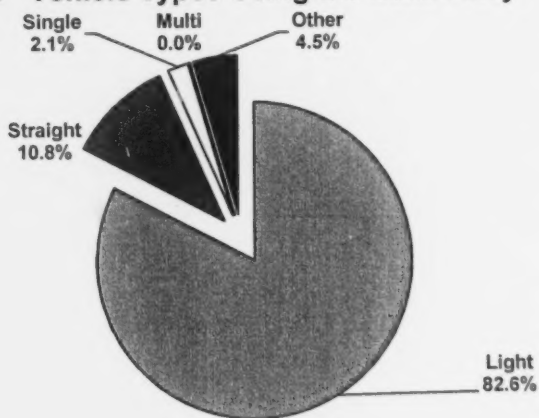
**Chart 5.3C 10 Year History of Traffic on the Cecil Ferry**



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Vehicles	13 073	11 873	15 254	13 368	14 151	12 897	10 774	12 987	13 070	12 192	12 964
Passengers	24 098	22 112	28 819	24 310	24 015	23 052	18 505	22 986	23 515	22 015	23 343
ADT	67	71	86	69	74	69	59	68	68	62	69
Truck %	10.1	9.1	10.0	9.1	7.7	8.9	7.0	12.2	12.2	12.9	9.9

The Cecil ferry registered decreases in all categories of traffic.

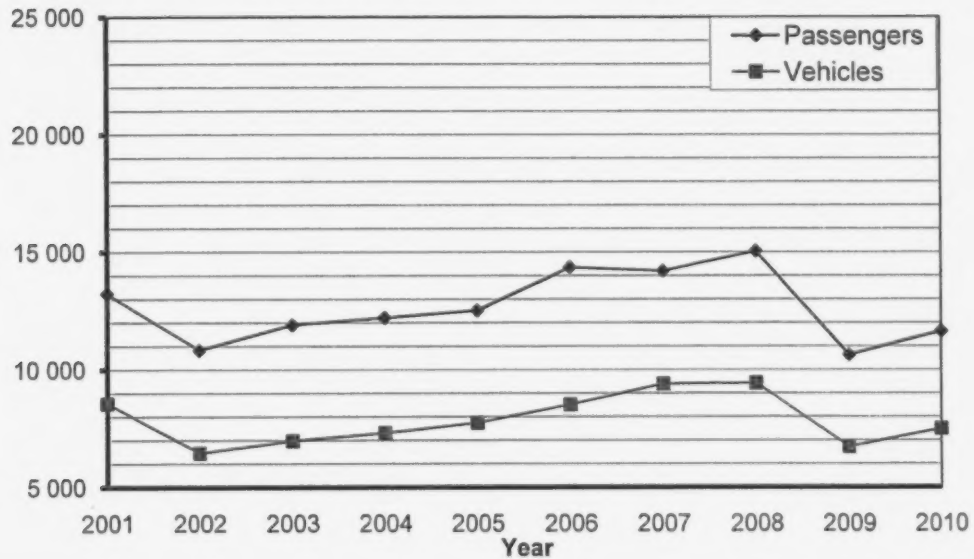
**Chart 5.3D Vehicle Types Using the Cecil Ferry**



Cecil ferry carried the highest percentage of truck traffic of all cable-stayed ferries. Conversely, the ferry carried the lowest percentage of light vehicles.



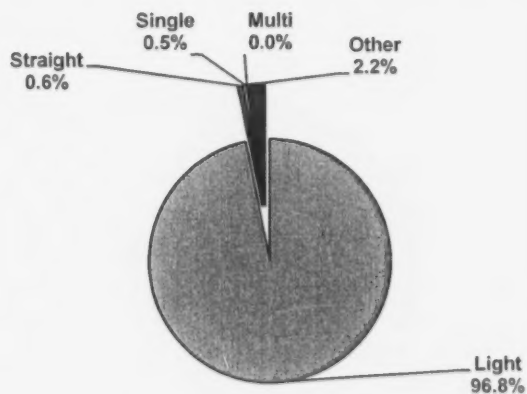
**Chart 5.3E 10 Year History of Traffic on the Fenton Ferry**



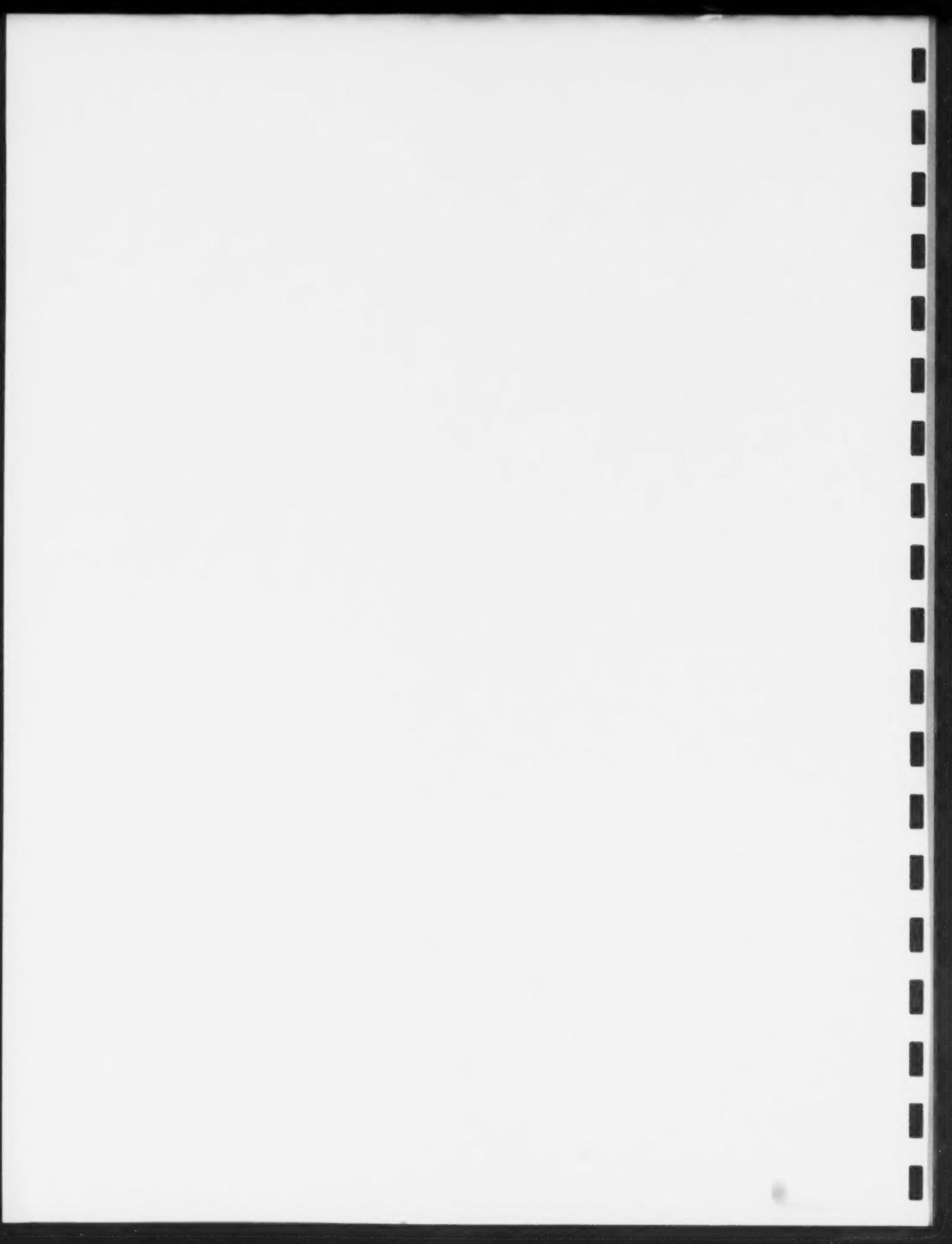
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Vehicles	8 563	6 461	6 974	7 306	7 738	8 519	9 394	9 437	6 713	7 488	7 859
Passengers	13 236	10 835	11 909	12 209	12 517	14 341	14 195	15 038	10 631	11 636	12 655
ADT	45	40	41	38	43	47	50	51	47	49	45
Truck %	1.0	0.8	1.8	0.7	0.5	0.5	0.4	0.8	0.3	1.1	0.8

In 2010, traffic volumes showed an increase from 2009 results, but did not reach peak volumes recorded between 2006 and 2008. Although Fenton did not register any downtime hours, it lost approximately a month and a half operating time due to the opening date being delayed to June 3, 2010. The opening date was postponed because of low water levels.

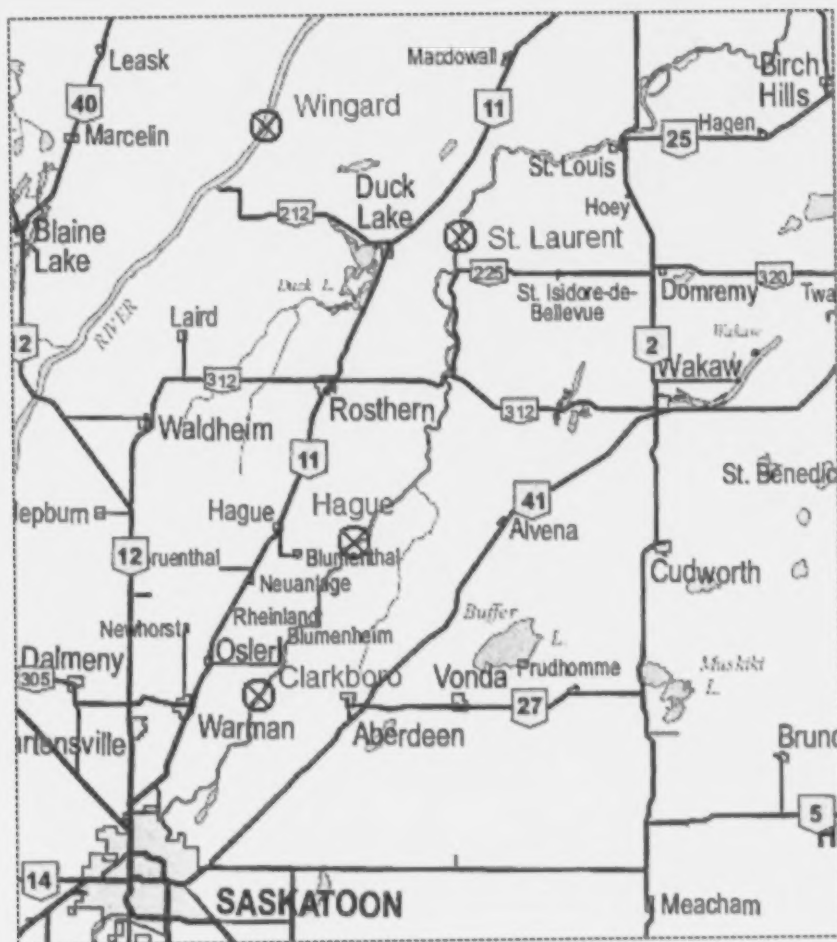
**Chart 5.3F Vehicle Types Using the Fenton Ferry**



Traffic on the Fenton ferry was almost exclusively passenger vehicles.



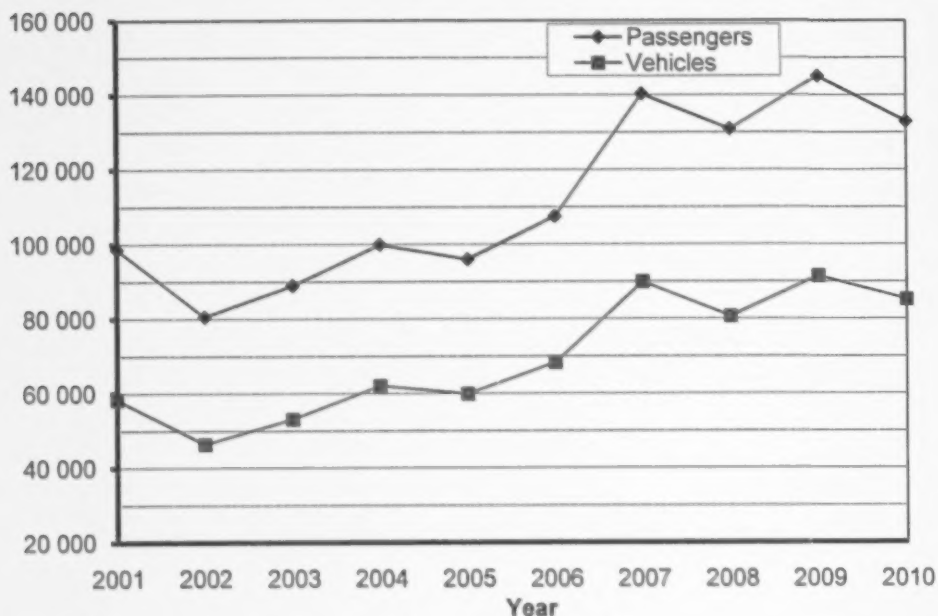
## 5.4 Saskatoon Area



The Saskatoon area contains four ferries: Clarkboro, St. Laurent, Wingard and Hague.



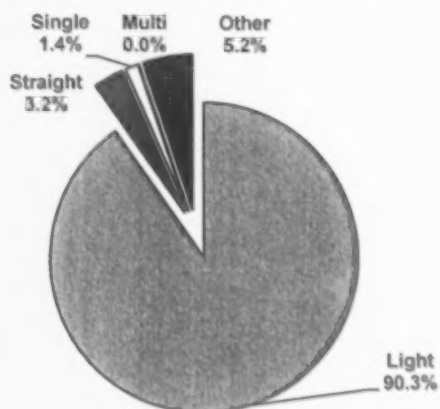
**Chart 5.4A 10 Year History of Traffic on the Clarkboro Ferry**



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Vehicles	58 303	46 374	53 066	62 005	59 852	68 246	89 880	80 672	91 462	85 193	69 505
Passengers	98 654	80 526	88 909	99 892	95 977	107 442	140 307	130 852	145 034	132 911	112 050
ADT	255	234	276	278	298	327	405	373	404	389	324
Truck %	5.0	3.9	4.4	4.0	4.9	4.9	5.7	6.5	5.0	4.5	4.9

Both vehicle total and ADT at Clarkboro ferry slightly decreased compared to 2009, but the volumes were still well above the ten year average. The decreases were unexpected considering the ferry increased its operating hours from 17 to 19 hours daily, and reported no downtime hours.

**Chart 5.4B Vehicle Types Using the Clarkboro Ferry**

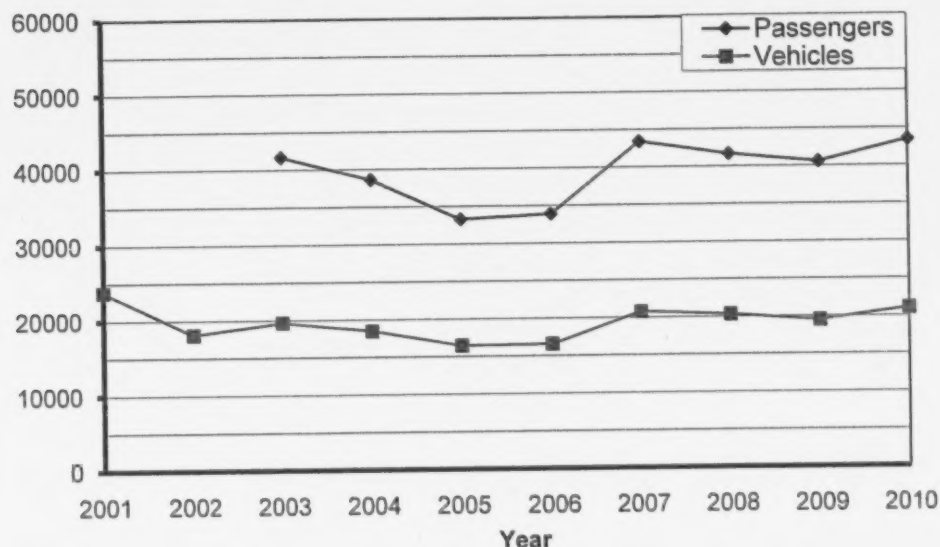


The Clarkboro ferry carried the most vehicles and had the highest ADT among Saskatchewan's ferries.





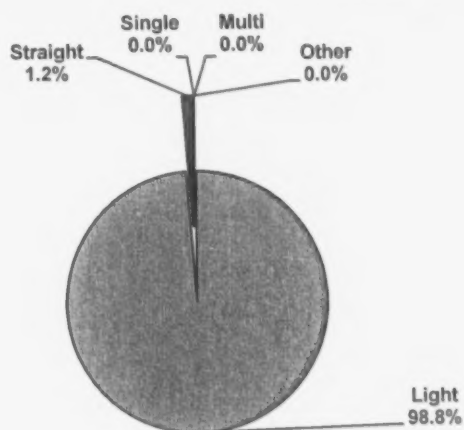
**Chart 5.4C 10 Year History of Traffic on the St. Laurent Ferry**



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Vehicles	23 796	18 102	19 661	18 474	16 438	16 550	20 752	20 305	19 485	21 077	19 464
Passengers			41 656	38 612	33 252	33 897	43 409	41 667	40 583	43 484	39 570
ADT	111	99	107	88	84	86	97	98	94	102	97
Truck %	2.6	3.8	1.6	1.2	2.8	1.9	2.3	1.3	1.5	1.2	2.0

An increase of 8% in total vehicles and ADT, and 7% in total passengers reversed a three-year downward trend at the St. Laurent ferry.

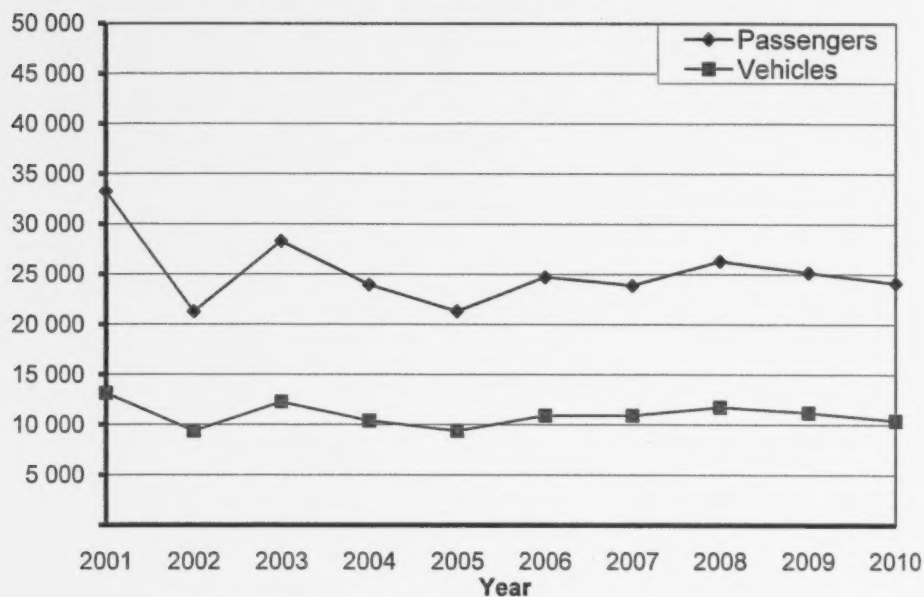
**Chart 5.4D Vehicle Types Using the St. Laurent Ferry**



The St. Laurent ferry carried predominantly passenger vehicles and exclusively straight trucks in the truck category.



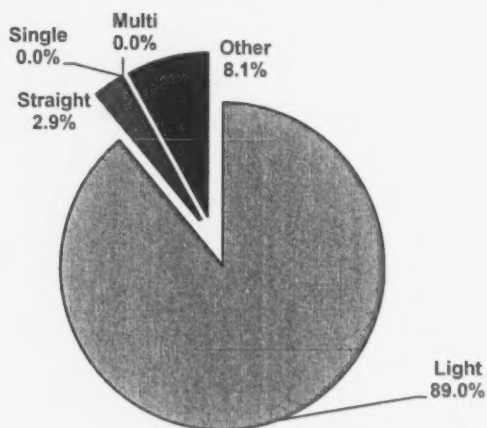
**Chart 5.4E 10 Year History of Traffic on the Wingard Ferry**



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Vehicles	13 158	9 368	12 276	10 390	9 375	10 898	10 915	11 736	11 192	10 411	10 972
Passengers	33 260	21 271	28 299	23 954	21 305	24 725	23 886	26 292	25 174	24 128	25 229
ADT	66	54	66	54	49	57	57	61	59	50	57
Truck %	3.2	3.9	5.0	4.3	3.5	2.3	2.3	2.2	3.4	2.9	3.3

Compared to 2009, total vehicles on the Wingard ferry decreased 7%, and ADT decreased 15%.

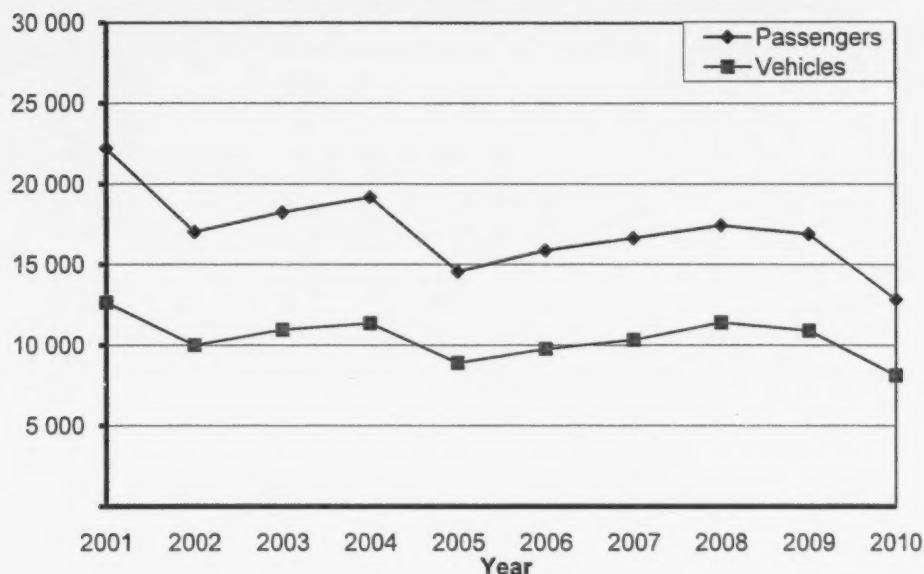
**Chart 5.4F Vehicle Types Using the Wingard Ferry**



Wingard ferry had a high percentage of "other" vehicles.



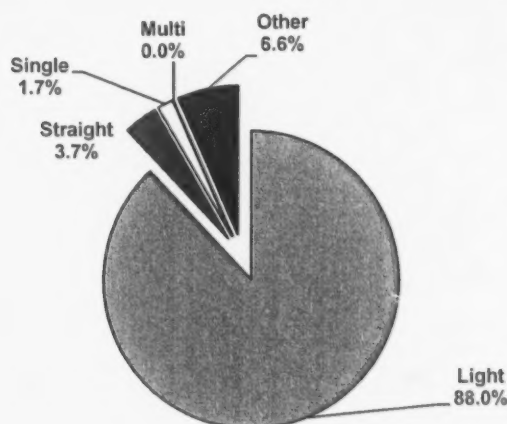
**Chart 5.4G 10 Year History of Traffic on the Hague Ferry**



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Vehicles	12 652	10 006	10 963	11 368	8 906	9 772	10 330	11 405	10 897	8 137	10 444
Passengers	22 221	17 040	18 254	19 189	14 580	15 885	16 639	17 435	16 893	12 833	17 097
ADT	59	55	59	54	51	50	49	54	49	41	52
Truck %	4.6	4.8	6.4	5.1	6.4	5.3	5.4	5.7	4.3	5.4	5.4

Traffic on the Hague ferry significantly decreased in all categories except truck percentage. Total vehicles decreased 25% and ADT decreased to the lowest level in ten years. Relative to other ferries in the Saskatoon area, this ferry was most affected by high water conditions in late June and early July.

**Chart 5.4H Vehicle Types Using the Hague Ferry**



A higher decrease in light vehicles and a smaller decrease in trucks resulted in the higher truck percentage in 2010.



## 5.5 Swift Current Area

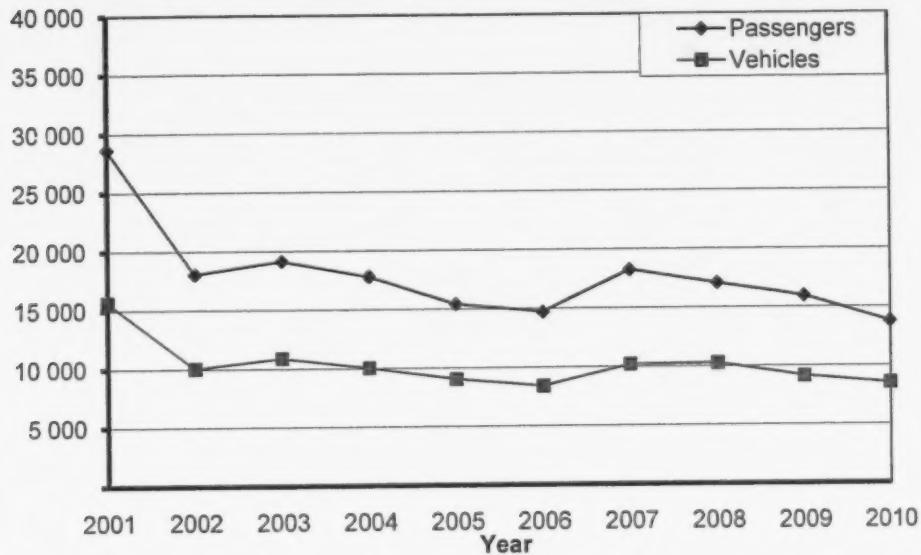


The Swift Current area has three ferries: Lemsford, Estuary and Lancer.





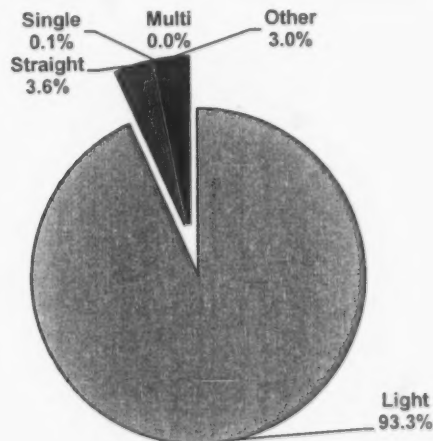
**Chart 5.5A 10 Year History of Traffic on the Lemsford Ferry**



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Vehicles	15 659	10 031	10 885	10 040	9 042	8 418	10 197	10 258	9 140	8 544	10 221
Passengers	28 651	18 050	19 129	17 797	15 406	14 708	18 233	17 067	15 958	13 762	17 876
ADT	69	55	59	48	48	44	47	48	43	42	50
Truck %	2.5	5.2	5.8	5.1	3.4	3.3	2.9	5.0	3.7	3.7	4.1

Total vehicles on the Lemsford ferry decreased 6% from 2009 to 2010, continuing the downward trend in traffic recorded since 2007. This ferry was least affected by the high water conditions that were common with the Swift Current area ferries during June and July.

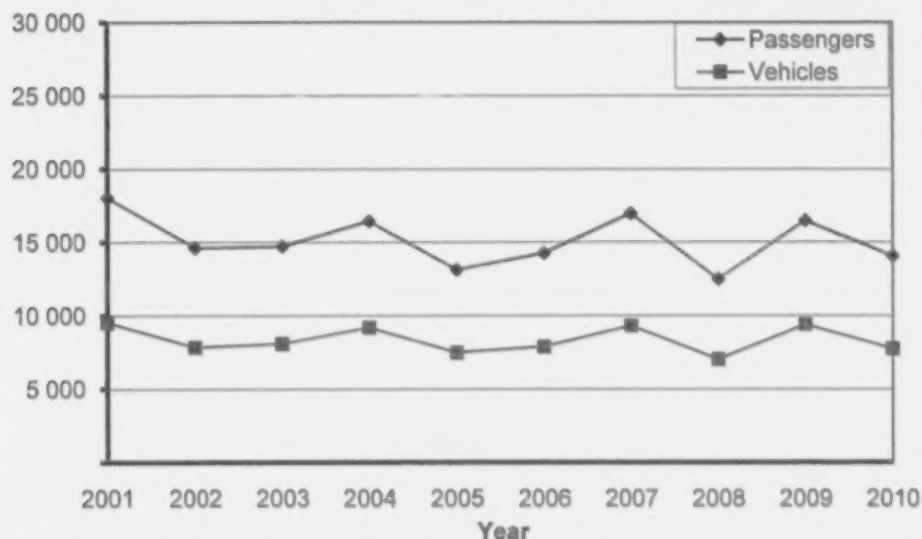
**Chart 5.5B Vehicle Types Using the Lemsford Ferry**



The vast majority of traffic on the Lemsford ferry was passenger vehicles.



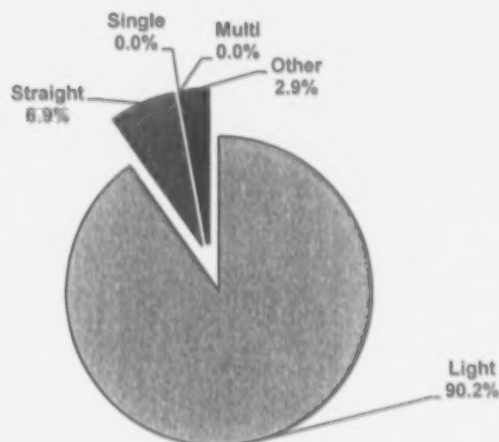
**Chart 5.5C 10 Year History of Traffic on the Estuary Ferry**



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Vehicles	9 541	7 847	8 096	9 200	7 496	7 888	9 326	7 029	9 407	7 763	8 359
Passengers	18 045	14 631	14 728	16 435	13 156	14 266	16 968	12 492	16 479	14 081	15 128
ADT	48	48	49	46	44	43	45	43	45	40	45
Truck %	4.7	8.9	6.1	7.5	6.3	6.3	4.8	7.3	6.1	6.9	6.5

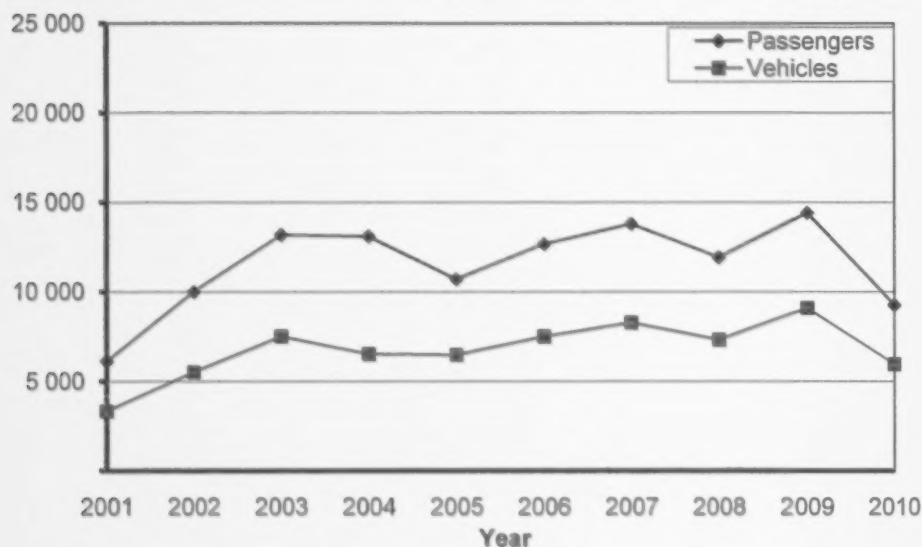
Traffic on the Estuary ferry decreased 18% in 2010. The 2010 ADT decreased 11% from 2009. The variability of river conditions contributes to the year to year fluctuation of traffic volumes. In both 2008 and 2010, the majority of downtime was caused by high water conditions. These conditions were not present in 2009.

**Chart 5.5D Vehicle Types Using the Estuary Ferry**





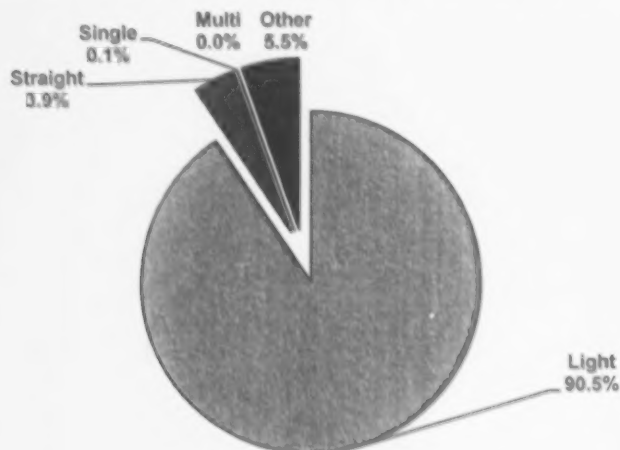
**Chart 5.5E 10 Year History of Traffic on the Lancer Ferry**



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Vehicles	3 324	5 503	7 490	6 498	6 461	7 490	8 270	7 312	9 087	5 955	6 739
Passengers	6 113	9 992	13 174	13 090	10 694	12 662	13 790	11 918	14 406	9 282	11 512
ADT	34	32	40	31	37	39	40	37	43	33	37
Truck %	2.3	3.9	6.7	6.4	4.8	6.6	4.7	4.8	3.7	4.0	4.8

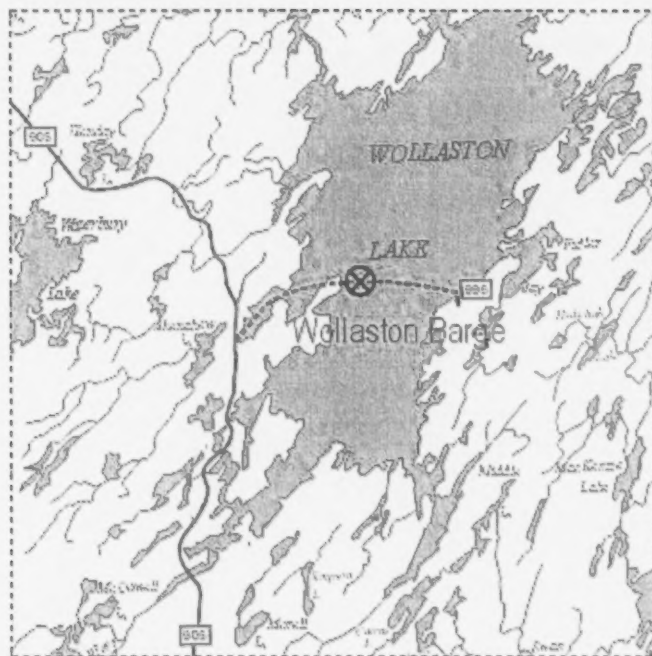
In 2010, the Lancer ferry recorded traffic volumes that were significantly lower than the ten year average. Vehicle totals decreased 34% while the ADT decreased 21% from 2009. This ferry experienced extremes in river conditions, from low water and sand bars at the beginning of the season, to approximately 26 days of high water conditions in June and July. Another factor contributing to the decrease in traffic was the poor condition of the ferry access roads during May and June.

**Chart 5.5F Vehicle Types Using the Lancer Ferry**



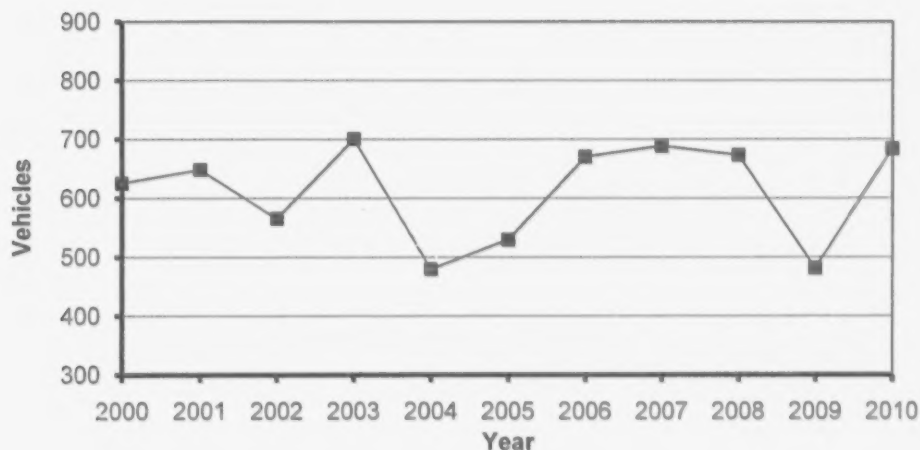


## 5.6 Wollaston Barge Ferry



The Wollaston Barge ferry connects the community of Wollaston Lake to Highway 905. This vessel is unique because it is the only free-swimming ferry in the province and is the only ferry that charges a fee. The Hatchet Lake Denesuline First Nation operates the ferry under contract to the Ministry. The operational season at Wollaston Lake was shorter than other ferries in the province due to the northern location. This ferry carries significantly lower traffic volumes than the southern ferries because the length of the crossing allows a maximum of only three round trips each day.

**Chart 5.6A Ten Year History of Traffic on the Wollaston Barge Ferry**





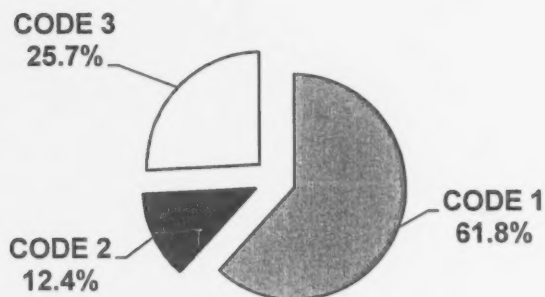


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Vehicles	625	648	565	700	479	529	670	668	673	481	684
ADT	5	6	5	5	5	5	5	5	5	5	5
Truck %	42.7	41.5	45	42.6	38.8	34	34.5	32.7	46.1	28.3	38.2

In 2010 the Wollaston Barge recorded traffic at levels similar to that reported in 2006, 2007, and 2008. The 30% increase in vehicles from 2009 was directly related to the length of the operating season in 2010, which was 39 days longer than in 2009. The ADT stayed consistent with the ten year average.

The vehicle classification system used at Wollaston is different than that used by the rest of the ferry system. The three codes used at the Wollaston Barge ferry are based on the fee structure charged to the different vehicle types.

**Chart 5.6B Vehicle Types Using the Wollaston Barge Ferry**



**Code 1** - Single Light Vehicle - car, truck (less than a 1 ton), motorcycle, etc.

**Code 2** - Other - includes single vehicles with trailer, trucks over one ton, etc.

**Code 3** - Full - Any semi trailer, construction equipment, etc.

As in previous years, the majority of vehicles using the barge were single light vehicles. Approximately twice as many trucks and commercial vehicles (Code 2 and Code 3) used the barge in 2010. Other than by air, this ferry provides the only summer access to Wollaston Lake. There are few passenger trips because the community is small and the trip to the nearest community is quite long.

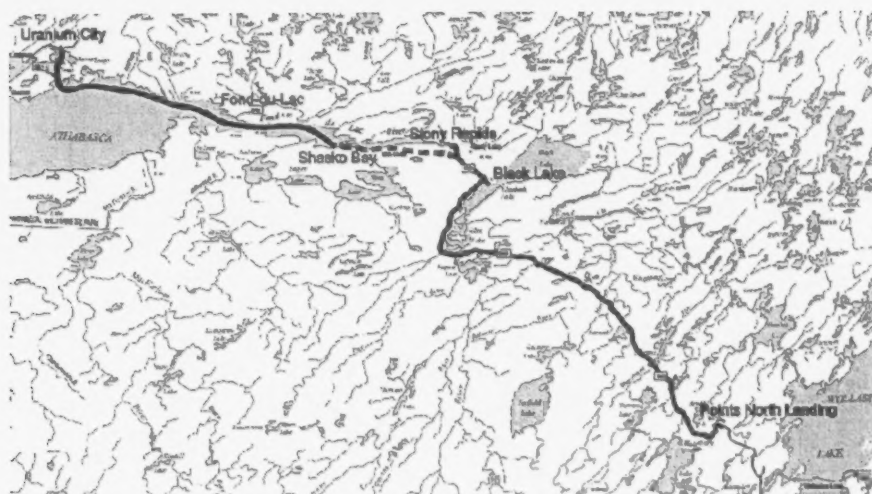


## 6.0 Seasonal/Winter Roads

All four seasonal/winter roads were operated by the Ministry in 2010. The four seasonal roads are the Cumberland House road (52 km), the Wollaston Lake road (46 km), the Athabasca road (358 km) and the Riverhurst ice road (2.4 km). Seasonal/winter roads are a vital link to the northern communities. They provide economical access to heavy and bulk commodities like fuel and building materials.

The length of the operating season for the seasonal/winter roads varies from year to year depending on winter conditions. Local traffic often uses the roads outside of the official season. The ice has to be sufficiently thick and the road completely constructed before the Ministry officially opens a seasonal/winter road to travel.

### 6.1 Athabasca Seasonal/Winter Road



The Athabasca seasonal/winter road was maintained by the Athabasca Basin Development Corporation under contract to the Ministry. Four separate road sections form the Athabasca seasonal/winter road. Over 185 km from Points North Landing to Black Lake is currently a bladed trail that requires extensive yearly repair work. The road from Stony Rapids to Shasko Bay was a winter-only road and the two sections from Shasko Bay to Uranium City are ice roads across Lake Athabasca. In recent years administrative information related to the two middle sections, Stony Rapids to Shasko Bay and Shasko Bay to Fond-du-Lac has been collected as one section from Stony Rapids to Fond-du-Lac. The combined lengths and operating costs for the section are listed in Table VII.

The combined length of the seasonal/winter road sections from Points North to Uranium City was 358 km. The 2009-10 cost of building and maintaining the four seasonal/winter road sections was \$1,963,678.86 for a unit cost of \$5,485 per km. Historical data for the sections are shown in the tables that follow.



**Table VI. History of the Athabasca Seasonal/Winter Road  
(Points North to Black Lake)**

Year	Opening	Closing	Length (days)	Length (km)	Cost
2002-03	N/A	N/A		180	\$866,523
2003-04	N/A	Mar 31		183	\$1,182,483
2004-05	N/A	Apr 04		183	\$1,106,954
2005-06	N/A	N/A		183	\$835,103
2006-07	Jun 06	Mar 31	298	183	\$1,182,483
2007-08	Jun 06	Mar 31	299	183	\$1,705,933
2008-09	N/A	Mar 31		183	\$1,366,324
2009-10	N/A	N/A		183	\$1,486,891

\* There were no official opening or closing dates in 2003, 2006, 2008, or 2010

**Table VII. History of the Athabasca Seasonal/Winter Road  
(Stony Rapids to Fond-du-Lac)**

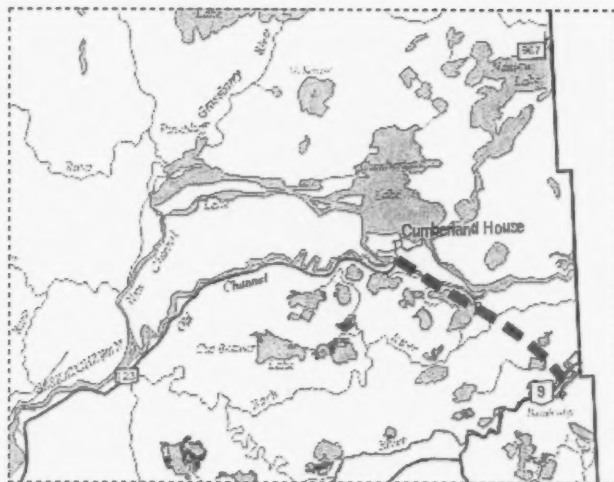
Year	Opening	Closing	Length (days)	Length (km)	Cost
2002-03	Feb 10	Mar 31	50	83.6	\$215,046
2003-04	Feb 11	Mar 31	50	82	\$172,255
2004-05	Feb 10	Apr 04	54	82	\$194,918
2005-06	Mar 02	Mar 31	29	82	\$176,100
2006-07	Feb 07	Mar 31	52	82	\$172,255
2007-08	Feb 07	Mar 31	52	82	\$331,984
2008-09	Jan 22	Mar 31	68	82	\$307,362
2009-10	Jan 22	Mar 31	68	82	\$218,938

**Table VIII. History of the Athabasca Seasonal/Winter Road  
(Fond du Lac to Uranium City)**

Year	Opening	Closing	Length (days)	Length (km)	Cost
2002-03	Feb 17	Mar 15	27	92	\$99,208
2003-04	Mar 01	Mar 18	18	93	\$60,000
2004-05	Mar 08	Apr 06	30	93	\$104,292
2005-06	Mar 17	Mar 31	14	93	\$94,932
2006-07	Mar 05	Mar 31	26	93	\$60,000
2007-08	Mar 05	Mar 31	26	93	\$160,999
2008-09	Feb 23	Mar 31	36	93	\$292,990
2009-10	Feb 23	Mar 31	36	93	\$257,850



## 6.2 Cumberland House Winter Road



The Cumberland House winter road was first operated in 1992-1993. The Cumberland House road was 53 km long and intersects with the north end of Highway 9 just west of the Manitoba boundary. The first 17 km were significantly improved in 2004-05. The roadway was widened and sight distances were improved. These first 17 kilometers were originally maintained by Weyerhaeuser.

Cumberland House winter road was opened to traffic on January 3, 2010, and closed on March 29, 2010. An estimated 30 vehicles per day used the road, for a total of 2490 vehicles during the operating season. The cost to operate the road during the entire 83 day season was \$47,560, which translates to a daily cost of \$675. The road was closed for two days during the season due to the Carrot River flooding. The 10 year history of the Cumberland House winter road is shown in the table below.

**Table IX. 10 Year History of the Cumberland Winter Road**

Year	Opening	Closing	Length (days)	Cost
2000-01	Jan 3	Mar 14	71	\$14,242
2001-02	Jan 11	Mar 28	77	\$13,113
2002-03	Jan 22	Mar 21	59	\$18,952
2003-04	Jan 30	Apr 2	64	\$22,424
2004-05	Dec 30	Mar 31	92	\$46,575*
2005-06	Feb 9	Mar 24	44	\$12,252
2006-07	Feb 3	Mar 20	47	\$33,585
2007-08	Jan 24	Apr 2	70	\$33,585
2008-09	Jan 2	N/A	N/A	\$56,931
2009-10	Jan 3	Mar 29	83	\$47,560

\* Widening and Sight Distance Improvements





### 6.3 Riverhurst Winter Road

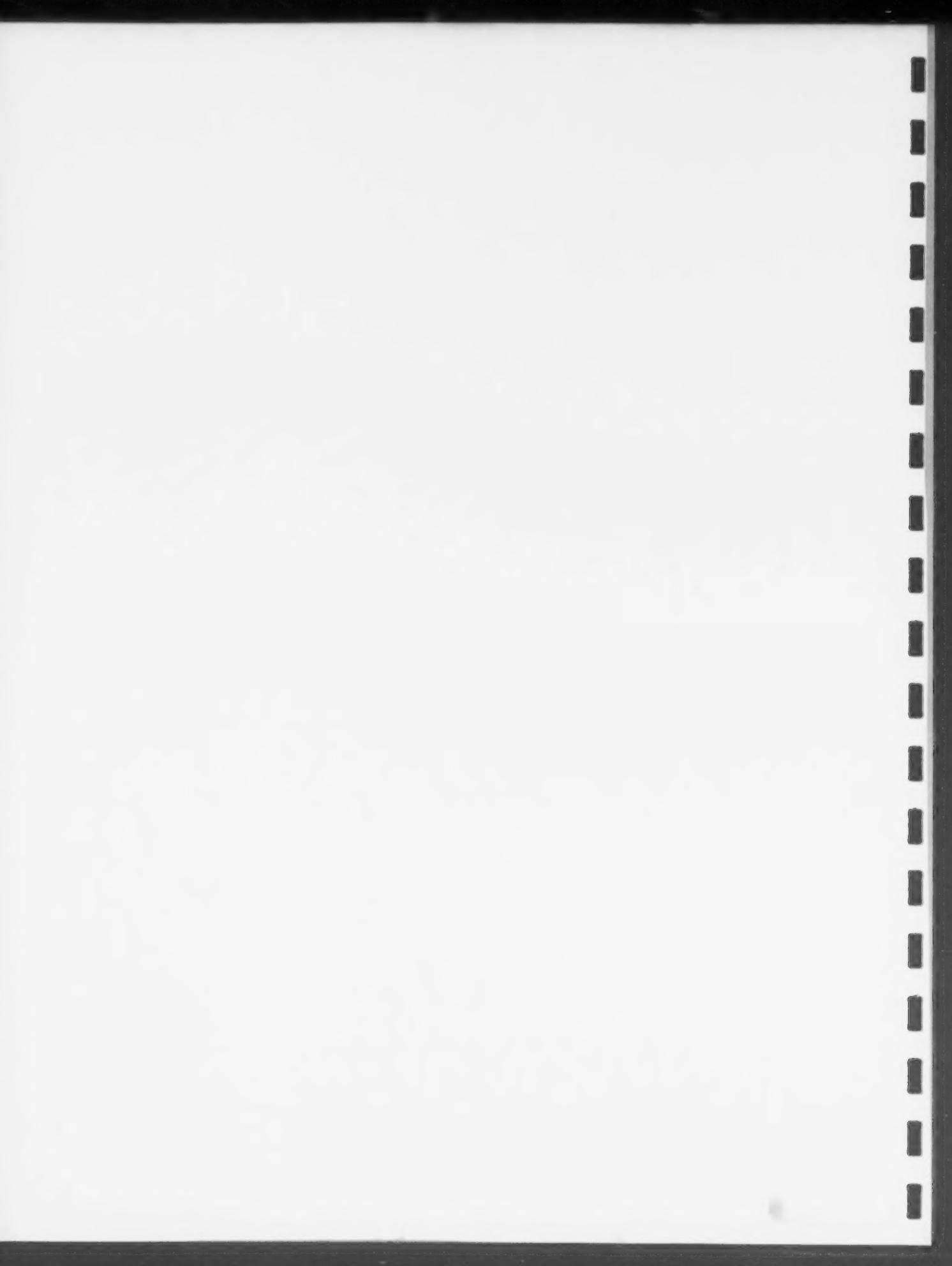


The Riverhurst ice road has operated intermittently for many years. In years when an official road is opened, the Ministry establishes and maintains it. Local residents may sometimes create a winter trail across the ice in the years that the Ministry opts not to open a winter road. There is no official operational record for those years.

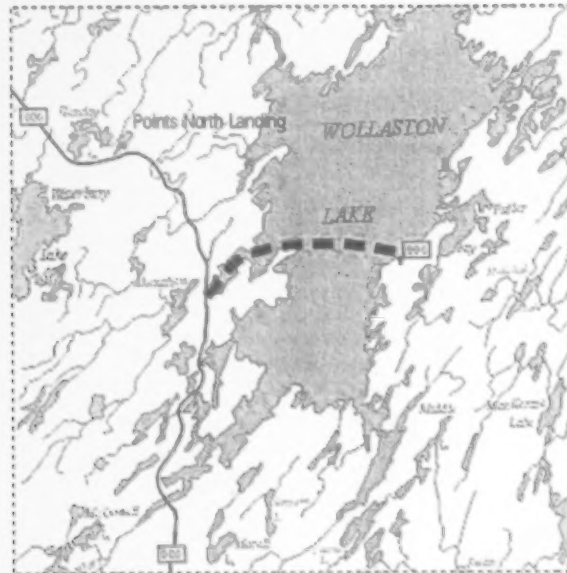
The Riverhurst ice road was opened on February 5, 2010 and closed on March 12, 2010 for a total of 35 days of operation. The total cost to operate the road for the year was \$16,262.00 or \$465 per day of operation. The ten year history of the Riverhurst Ice Road is shown in the table below.

**Table X. 10 Year History of the Riverhurst Ice Road**

Year	Opening	Closing	Length(days)	Cost
1999-2000	N/A	N/A		N/A
2000-01	Mar 4	Mar 12	9	N/A
2001-02	N/A	N/A		N/A
2002-03	Feb 21	Mar 15	23	\$16,547
2003-04	Feb 4	Mar 10	36	\$60,782
2004-05	Feb 4	Mar 6	31	\$21,000
2005-06	N/A	N/A		N/A
2006-07	Jan 26	Mar 9	42	\$15,402
2007-08	Feb 3	Mar 12	38	\$13,854
2008-09	Feb 5	N/A		\$27,953
2009-10	Feb 5	Mar 12	35	\$16,262



#### 6.4 Wollaston Lake Winter Road



The Wollaston Lake ice road was 46 km long and crosses the ice on Wollaston Lake to provide access to the residents of the community of Wollaston Lake. The road was established and maintained by the Hatchet Lake Denesuline First Nation under contract to the Ministry. The total operating cost was \$198,500 for a unit cost of \$4,315 per km or \$2,963 per day. An estimated 200 vehicles per week used the roadway, for a total of 2,000 vehicles during the operating season. The operational history of the Wollaston Lake ice road is shown in the table below.

Table XI. Ten-Year History of the Wollaston Lake Ice Road

Year	Opening	Closing	Length(days)	Cost
2000-01	Feb 20	Apr 08	46	\$95,844
2001-02	Feb 12	Apr 05	53	\$99,158
2002-03	Feb 10	Apr 05	55	\$124,813
2003-04	Feb 18	Mar 31	43	\$100,079
2004-05	Feb 09	Apr 06	57	\$97,000
2005-06	Feb 21	Mar 31	38	\$124,246
2006-07	Feb 02	Mar 31	58	\$100,079
2007-08	Jan 24	Mar 31	67	\$172,500
2008-09	Jan 23	Mar 31	67	\$172,500
2009-10	Jan 23	Mar 31	67	\$198,500



## **7.0 Conclusions**

Year to year traffic fluctuations at individual ferries are related to the operating season length, river conditions and local economic activity. In 2010, the ferry system carried 6% fewer vehicles than in 2009, but volumes were still above the ten year average. Some ferries were closed for a small number of days because of high water levels, sandbars and mechanical issues. Overall, the 2010 ADT was 4% lower than the 2009 ADT. The number of passengers traveling the ferries was approximately 8% lower than in 2009.

### **7.1 Operating Season/Downtime**

- The 2010 operating season length was slightly shorter than the 2009 season.
- Fenton ferry did not open until June 3. The late opening date was due to low water conditions.
- As in previous years, the Riverhurst ferry had the longest operating season, extending into late November. The closure date was the earliest since 1996.
- Clarkboro ferry extended its daily operating hours from 17 to 19 hours.
- The Hague, Estuary, and Lancer ferries were closed for the longest periods of time due to high water levels.
- The shutdown periods ranged from no shutdown days at three of the ferries to highs of 7.3% at Hague, 7.7% at Estuary, and 15.1% at Lancer.
- The operating periods for all seasonal/winter roads were very similar to those in 2009.

### **7.2 Traffic Volumes**

- Ferries with the largest decreases in traffic volumes compared to 2009 were Lancer at 35%, Hague at 25% and Estuary at 17%.
- Ferries with the largest increases in traffic volumes compared to 2009 were Fenton at 12% and Paynton at 11%.
- Wollaston barge recorded a 42% increase in traffic volume compared to 2009.
- Four ferries had their ADT drop by more than 10% compared with the 2009 ADT: Lancer by 23%, Hague by 16%, Wingard by 15% and Estuary by 11%.
- The largest increases in ADT from 2009 were reported at the Paynton ferry (11%) and the St. Laurent ferry (9%).



### **7.3 Vehicle Classifications**

- St. Laurent, Weldon, and Fenton ferries carry the largest percentage of light vehicles.
- The Wingard, Riverhurst, Paynton, and Hague ferries had the highest percentages of "other" vehicles, which are normally interpreted as farming and recreational vehicles.
- The Cecil, Estuary and Paynton ferries had a large percentage of straight trucks, which are used primarily for short distance hauling.
- Riverhurst and Cecil ferries had the highest percentage of single and multi trailer semi trucks.
- Fenton, Cecil, Hague and Estuary all saw significant increases in truck traffic percentage.
- The Wollaston Barge ferry had the highest percentage of trucks.

### **8.0 Recommendation**

One change that could be instituted to improve the accuracy of the annual ferry report is to provide an updated data sheet format to the operators of ferries that report a month's data on a single sheet. Some operators do use the formatted sheet as shown in Appendix A, while others have developed formats with columns in varying order and more limited space to enter comments such as specific downtime periods. One possible improvement is an expansion of the "Comments" column heading to read "Comments/Downtime" to clarify and emphasize downtime reporting. A sample of the reformatted data sheet has been included in Appendix A.





## Appendix A





**Saskatchewan  
Ministry of  
Highways and  
Infrastructure**

## Ferry Traffic Data Summary

Ferry Crossing \_\_\_\_\_ Month of \_\_\_\_\_, 20 \_\_\_\_\_

Day	LGT	Straight Trucks	Semi Trailer	Multi Trailer	Other	Passengers	Crossings	Comments/Downtime
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
<b>Totals</b>								

Statement Certified Correct

Ferry operator \_\_\_\_\_

**KEY**

LGT -Cars & Pickups  
 Straight Trucks -Non-articulated  
 Semi Trailer -Single Trailer  
 Multi-Trailer -2 or more Trailers

Notes:

- 1) "Other" includes farm or construction equipment etc.
- 2) Give details of "Other" in "Comments/Downtime" ie: dangerous goods, equipment type, product hauled.
- 3) In "Comments/Downtime" also report cause and start/end hours of any downtime periods.



## Sheet No. \_\_\_\_\_

Date \_\_\_\_\_ Shift \_\_\_\_\_ Operators 1. \_\_\_\_\_ 2. \_\_\_\_\_

[illegible]

erry operator



## Appendix B





**2010 Ferry Downtime**

Ferry	Date	Hours	2010 Total Downtime	% of Time Out of Service	Reason
Riverhurst	May 23 and 25	19	69.5	1.4%	Wind
	July 12 and 28	2			Repairs
	July 29	15			Cable Repairs
	August 23	7			Repairs
	August 31	3.5			Repairs
	September 1	6			Repairs
	September 6	4			Wind
	September 29	1			Electrical Repair
	October 8	11			Cable Repairs
	October 25	1			Exhaust Repair
Paynton	June 15 to 17	51	65.5	1.9%	High water
	August 8	7			Breakdown
	October 4	5.5			Undetermined
	October 5	2			Wind
St. Laurent	June 21 to 24	68	68	1.9%	High Water
Lemsford	May 23 to 24	5.5	76.5	2.2%	High Water
	June 3	3			Repairs
	June 20 to 24	68			High Water
Weldon	April 26	17	17	0.5%	No reason given
Hague	June 21 to 30	170	265	7.3%	High Water
	July 1 to 5	78			High Water
	August 8	17			No reason given
Estuary	May 31	17	274	7.7%	High Water
	June 1 to 3	35			High Water
	June 18 to 30	205			High Water
	July 1	17			High Water
Lancer	April 27 to 30	64	539	15.2%	Sand Bar / Low Water
	May 1	17			Sand Bar
	May 31	6			High Water
	June 1 to 5	69			High Water
	June 17 to 30	238			High Water
	July 1 to 9	145			High Water
Fenton	June 7	7	7	0.3%	Breakdown



## Appendix C



# Historic Traffic Volumes

Ferry	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Clarkboro	34 674	42 448	31 975	39 338	42 991	40 839	52 185	53 780	58 303	46 374	53 066	62 005	59 852	68 246	89 880	80 672	91 462	85 193	57 405
Paynton	42 058	30 686	30 453	30 172	34 365	32 453	28 808	33 749	31 348	28 910	32 603	33 996	31 155	31 752	30 111	27 270	27 212	30 165	31 515
Riverhurst	40 242	40 076	41 291	36 449	50 766	45 763	42 424	50 010	47 867	37 578	34 288	34 258	27 829	22 741	31 245	30 203	33 886	30 136	37 614
Weldon	24 754	30 465	26 268	29 657	29 455	28 003	30 382	27 770	25 875	22 461	25 308	27 709	26 124	26 137	25 887	27 838	28 850	26 491	27 191
St.Laurent	18 556	20 421	30 030	19 875	16 987	17 133	29 143	29 980	23 796	18 102	19 661	18 474	16 438	16 550	20 752	20 305	19 485	21 077	20 931
Cecil	13 210	12 752	12 678	11 603	11 303	11 234	11 016	11 484	13 073	11 873	15 254	13 368	14 151	12 897	10 774	12 987	13 070	12 192	12 496
Wingard	10 115	10 719	10 687	9 878	9 420	12 467	12 227	12 791	13 158	9 368	12 276	10 390	9 375	10 898	10 915	11 736	11 192	10 411	11 001
Lemsford	13 381	13 471	12 170	12 805	14 393	11 849	11 730	11 623	15 659	10 031	10 885	10 040	9 042	8 418	10 197	10 258	9 140	8 544	11 313
Hague	20 883	14 442	12 425	11 961	14 577	13 122	12 845	12 156	12 652	10 006	10 963	11 368	8 906	9 772	10 330	11 405	10 897	8 137	12 047
Fenton	6 517	9 730	8 582	8 366	8 716	8 324	9 640	8 533	8 563	6 461	6 974	7 306	7 738	8 519	9 394	9 437	6 713	7 488	8 167
Estuary	8 153	7 278	6 844	8 463	9 058	9 217	9 793	10 437	9 541	7 847	8 096	9 200	7 496	7 888	9 326	7 029	9 407	7 763	8 491
Lancer	7 047	7 649	5 673	6 789	6 685	6 967	7 604	7 421	3 324	5 503	7 490	6 498	6 461	7 490	8 270	7 312	9 087	5 955	6 346
Wollaston Barge							559	625	648	565	700	479	529	670	688	673	481	684	608
Cumberland	24 000	23 041	28 198	19 082	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	23 580
Total	263 590	263 178	257 274	244 438	248 716	237 371	258 356	270 359	263 807	215 079	237 564	245 091	225 096	231 978	267 769	257 125	270 882	254 236	250 662



## Appendix D





# Historic Average Daily Traffic (ADT)

Ferry	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Clarkboro	218	206	234	255	255	234	276	278	298	327	405	373	404	389	297
Paynton	210	159	141	170	158	167	175	180	161	169	162	152	140	155	164
Riverhurst	213	190	174	216	204	176	169	153	127	131	139	141	162	150	168
Weldon	153	142	159	141	135	133	142	141	144	144	137	146	145	136	143
St.Laurent	91	85	130	147	111	99	107	88	84	86	97	98	94	102	101
Cecil	59	57	58	57	67	71	86	69	74	69	59	68	68	62	66
Wingard	50	63	63	63	66	54	66	54	49	57	57	61	59	50	58
Lemsford	68	58	52	58	69	55	59	48	48	44	47	48	43	42	53
Hague	75	68	58	61	59	55	59	54	51	50	49	54	49	41	56
Fenton	45	43	51	45	45	40	41	38	43	47	50	51	47	49	45
Estuary	44	47	44	52	48	48	49	46	44	43	45	43	45	40	46
Lancer	33	33	34	37	34	32	40	31	37	39	40	37	43	34	36
Wollaston Barge			5	5	6	5	5	5	5	5	5	5	5	5	5
Total	1 261	1 152	1 204	1 307	1 255	1 171	1 276	1 184	1 165	1 209	1 291	1 278	1 304	1 256	1 237



## Appendix E



# Historic Passenger Volumes

Ferry	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
Clarkboro	69 292	98 654	80 526	88 909	99 892	95 977	107 442	140 307	130 852	145 034	132 911	108 163
Paynton	60 119	55 475	50 577	56 014	57 743	54 100	46 889	51 909	45 457	45 234	46 284	51 800
Riverhurst	100 979	90 056	70 700	66 422	63 193	51 692	42 213	56 320	54 742	60 157	54 189	64 606
Weldon	N/A	49 555	44 007	48 249	54 082	51 835	52 851	50 847	55 133	56 449	46 773	50 978
St.Laurent	N/A	N/A	N/A	41 656	38 612	33 252	33 897	43 409	41 667	40 583	43 484	39 570
Cecil	N/A	24 098	22 112	28 819	24 310	24 015	23 052	18 505	22 986	23 515	22 015	23 343
Wingard	24 417	33 260	21 271	28 299	23 954	21 305	24 725	23 886	26 292	25 174	24 128	25 156
Lemsford	21 548	28 651	18 050	19 129	17 797	15 406	14 708	18 233	17 067	15 958	13 762	18 210
Hague	13 705	22 221	17 040	18 254	19 189	14 580	15 885	16 639	17 435	16 893	12 833	16 789
Fenton	N/A	13 236	10 835	11 909	12 209	12 517	14 341	14 195	15 038	10 631	11 636	12 655
Estuary	19 152	18 045	14 631	14 728	16 435	13 156	14 266	16 968	12 492	16 479	14 081	15 494
Lancer	13 668	6 113	9 992	13 174	13 090	10 694	12 662	13 790	11 918	14 406	9 282	11 708
Total	322 880	439 364	359 741	435 562	440 506	398 529	402 931	465 008	451 079	470 513	431 378	419 772

